

US EPA RECORDS CENTER REGION 5



478664

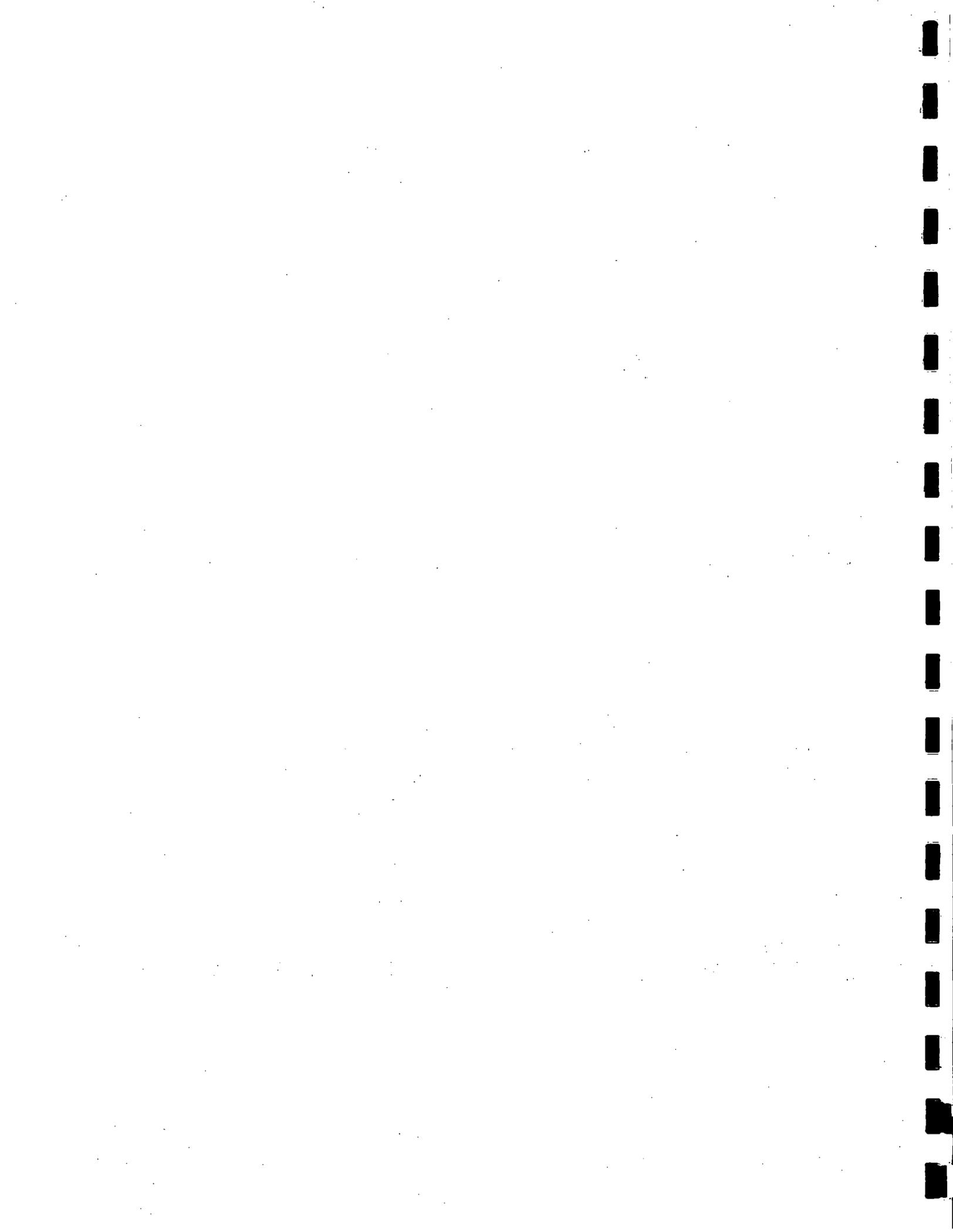
1990 K.4
PROJECT MANUAL
FOR
SOIL BORINGS AND MONITORING WELL INSTALLATION
AND RELATED ACTIVITIES FOR THE
HIMCO DUMP SUPERFUND SITE
ELKHART, INDIANA

1990

Donohue & Associates, Inc.
Engineers, Architects & Scientists
111 North Canal Street
Suite 305
Chicago, IL 60606
Phone: 312-902-7100

Project No. 20026
Subcontract No. 17-5L45-2

Copyright Donohue, 1990





PROJECT MANUAL
 FOR
 SOIL BORINGS AND MONITORING WELL INSTALLATION
 AND RELATED ACTIVITIES FOR THE
 HIMCO DUMP SUPERFUND SITE
 ELKHART, INDIANA

GENERAL TABLE OF CONTENTS

	PAGE NO.
INSTRUCTIONS TO BIDDERS.....	IB-1 to IB-7
FEDERAL REQUIREMENTS	
REPRESENTATIONS, CERTIFICATIONS, AND OTHER STATEMENTS OF OFFERORS.....	FR-1 to FR-11
BID FORM.....	B-1 to B-11
SUBCONTRACT AGREEMENT.....	SA-1 to SA-6
TERMS AND CONDITIONS REQUIRED FOR FEDERAL SUBCONTRACTS	
Federal Acquisition Regulation (FAR) Clauses.....	FAR-1 to FAR-3
Environmental Protection Agency Acquisition Regulation (EPAAR) Clauses.....	EPAAR-1 to EPAAR-6
SPECIFICATIONS	
DIVISION 1 - GENERAL REQUIREMENTS	
01010 Statement of Work.....	01010-1 to 01010-5
01155 On-Site Health and Safety Requirements.....	01155-1 to 01155-2
01300 Submittals.....	01300-1 to 01300-3
DIVISION 2 - TECHNICAL REQUIREMENTS	
02025 Test Pit Excavation.....	02025-1 to 02025-2
02910 Soil Borings and Monitoring Wells.....	02910-1 to 02910-9
APPENDIX	
A National Enforcement Investigations Center Policies and Procedures	
B Change Order Form	
C General Location Map	
D General Borings and Well Locations	
E Summary of Borings and Well Locations	
F Typical Well Construction Diagrams	
G Site Specific Health and Safety Plan (HASP) (provided under separate cover)	
H List of Potentially Responsible Parties	
I Daily Pay Sheet	

I N S T R U C T I O N S

T O

B I D D E R S

INSTRUCTIONS TO BIDDERS

T A B L E O F C O N T E N T S

ARTICLE	PAGE NO.
1 DEFINED TERMS	IB-1
2 COPIES OF BIDDING DOCUMENTS	IB-1
3 QUALIFICATIONS OF BIDDERS	IB-1
4 EXAMINATION OF SUBCONTRACT DOCUMENTS	IB-2
5 INTERPRETATIONS AND ADDENDA.....	IB-3
6 BIDDING REQUIREMENTS	IB-3
7 CONTRACT TIME	IB-3
8 (DELETED)	IB-3
9 TIER SUBCONTRACTORS, SUPPLIERS, AND OTHERS	IB-3
10 BID FORM	IB-4
11 SUBMISSION OF BIDS	IB-5
12 MODIFICATION AND WITHDRAWAL OF BID	IB-5
13 AWARD OF CONTRACT(S)	IB-5
14 SUBCONTRACT SECURITY AND INSURANCE CERTIFICATION.....	IB-6
15 SIGNING OF SUBCONTRACT AGREEMENT	IB-6
16 SALES TAX	IB-7
17 EQUAL EMPLOYMENT OPPORTUNITY REQUIREMENTS	IB-7
18 (DELETED).....	IB-7
19 SMALL, MINORITY, WOMEN'S, AND LABOR SURPLUS AREA CONTRACTORS	IB-7
20 HEALTH AND SAFETY	IB-7
21 REPRESENTATIONS, CERTIFICATIONS, AND OTHER STATEMENTS OF OFFERORS	IB-7
22 CONFLICT OF INTEREST.....	IB-7

INSTRUCTIONS TO BIDDERS

ARTICLE 1 - DEFINED TERMS

1.1. Terms used in these Instructions to Bidders which are defined as follows. The term "Bidder" means one who submits a Bid directly to Donohue & Associates, Inc., (DONOHUE) as distinct from a sub-bidder, who submits a bid to Bidder. The term "Successful Bidder" means the lowest responsive, responsible Bidder to whom DONOHUE (on the basis of DONOHUE'S evaluation as herein-after provided) makes an award. The term "Bidding Documents" includes the Request for Proposal, Instructions to Bidders, the Bid Form, and the proposed "Subcontract Documents" (including all Addenda issued prior to receipt of Bids).

ARTICLE 2 - COPIES OF BIDDING DOCUMENTS

2.1. Complete sets of Bidding Documents shall be used in preparing Bids. DONOHUE does not assume any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

2.2. DONOHUE, in making copies of Bidding Documents available on the above terms, do so only for the purpose of obtaining Bids on the Work and do not confer a license or grant for any other use.

ARTICLE 3 - QUALIFICATIONS OF BIDDERS

3.1. Each Bid must contain evidence of Bidder's qualification to do business in the state where the Project is located or covenant to obtain such qualification prior to award of the subcontract.

3.2. Before a subcontract is awarded, the Bidder to whom an award is contemplated may be required to submit the following information to DONOHUE for consideration:

3.2.1. The address and description of the Bidder's place of business.

3.2.2. The number of years engaged in the contracting business under the present firm name, and the state where incorporated.

3.2.3. A list of the property and equipment available to the Bidder to evaluate whether Bidder can complete the Work in accordance with the Bidding Documents.

3.2.4. A financial statement of the Bidder showing that the Bidder has the financial resources to meet all obligations incidental to the Work.

3.2.5. The Bidder's performance record giving the description, location, and telephone numbers of similar projects accomplished in a satisfactory manner by the Bidder.

3.2.6. A list of projects presently under contract, the approximate contract amount, and percent of completion of each.

3.2.7. A list of contracts which resulted in law suits. If none, so state.

3.2.8. A list of contracts defaulted. If none, so state.

3.2.9. A statement of the Bidder indicating whether or not the Bidder has ever filed bankruptcy while performing Work of like nature or magnitude.

3.2.10. A list of officers of the firm who, while in the employ of the firm or the employ of previous firms, were associated with contracts which resulted in lawsuits, contracts defaulted or filed for bankruptcy.

3.2.11. The technical experience of personnel guaranteed to be employed in the responsible charge of the Work stating whether the personnel have or have not performed satisfactorily on other contracts of like nature and magnitude or comparable difficulty at similar rate of progress.

3.2.12. Such additional information as will assist DONOHUE in determining whether the Bidder is adequately prepared to fulfill the subcontract.

3.3. The object of the request for the qualification of Bidder is not to discourage bidding or make it difficult for qualified Bidders to file Bids. Neither is it intended to discourage beginning contractors. It is intended to make it possible for DONOHUE to have exact information on financial ability, equipment, and experience in order to reduce the hazards involved in awarding contracts to parties who may not be qualified to perform the Work as specified.

3.4. DONOHUE'S decision as to qualification of the Bidder shall be final.

ARTICLE 4 - EXAMINATION OF SUBCONTRACT DOCUMENTS

4.1. It is the responsibility of each Bidder before submitting a Bid, to (a) examine the Subcontract Documents thoroughly, (b) visit the site to become familiar with local conditions that may affect cost, progress, performance or furnishing of the work, (c) consider Federal, state and local Laws and Regulations that may affect cost, progress, performance or furnishing of the Work, (d) study and carefully correlate Bidder's observations with the Subcontract Documents, and (e) notify DONOHUE of all conflicts, errors or discrepancies the bidder believes are contained in the Contract Documents.

4.2. The submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article 4, that without exception the Bid is premised upon performing and furnishing the Work required by the Subcontract Documents and by such means, methods, techniques, sequences or procedures of construction as may be indicated in or required by the Subcontract Documents, and that the Subcontract Documents are sufficient in scope and detail to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

ARTICLE 5 - INTERPRETATIONS AND ADDENDA

5.1. All questions about the meaning or intent of the Subcontract Documents shall be submitted to DONOHUE in writing not less than 7 days prior to the date for opening of Bids. No response will be provided to a Bidder's oral question if the question involves an interpretation of the intent or meaning of the Subcontract Documents, or the equality or use of products or methods other than those designated or described on the Drawings or in the Specifications. Any information provided to Bidders other than by means of the Subcontract Documents, including Addenda as described below, is given informally for information and the convenience of the Bidder only and is not guaranteed. The Bidder agrees that such information shall not be used as the basis of nor shall the giving of any such information entitle the Bidder to assert any claim or demand against DONOHUE on account thereof.

5.1.1. Replies will be issued by Addenda mailed or delivered to all parties recorded by DONOHUE as having received the Subcontract Documents.

5.2. DONOHUE will neither approve nor disapprove materials or equipment prior to the opening of Bids.

5.3. Addenda may also be issued to modify the Bidding Documents as deemed advisable by DONOHUE.

5.4. Each Bidder shall ascertain prior to submitting a Bid that Bidder has received all Addenda issued, and each Bidder shall acknowledge receipt on the Bid Form.

ARTICLE 6 - BIDDING REQUIREMENTS

6.1. Methodology - Submit with Bid a written plan describing how the work will be performed. At a minimum, this plan shall include a description of the work methodology to be used, Bidder's understanding of the well drilling, soil sampling, the classifications of personnel who will do the work and their qualifications, a listing of equipment that will be used, and a proposed work schedule.

ARTICLE 7 - CONTRACT TIME

7.1. The number of days within which, or the dates by which, the Work is to be substantially completed and also completed and ready for final payment (the Contract Time) are set forth in the Bid Form and the Subcontract Agreement.

ARTICLE 8 - "DELETED"

ARTICLE 9 - TIER SUBCONTRACTORS, SUPPLIERS, AND OTHERS

9.1. The apparent successful bidder, or any other Bidder so requested, shall submit to the office of DONOHUE the following information:

9.1.1. The designation of the Work to be performed by SUBCONTRACTOR with their own forces.

9.1.2. A list of the names of SUBCONTRACTOR'S proposed tier Subcontractors having a direct contract with SUBCONTRACTOR and whose portion of the Work exceeds \$5,000, along with the Work to be performed by each.

9.1.3. Bidder shall specify the number of people planned to be sent to the site during the performance of the Work correlated with the proposed progress schedule.

ARTICLE 10 - BID FORM

10.1. Only the Bid Forms included with this Project Manual shall be used.

10.1.1. The Contract Price shall be in writing and in figures; in case of conflict, the former shall apply.

10.1.2. Bidder is required to fill in unit or and total price for each item as called for on Bid Form.

10.1.3. All blanks on the Bid Form must be completed in ink or by typewriter.

10.2. The Bidder, when signing the Bid(s) shall meet the following requirements:

10.2.1. The full name, telephone number, and business address of Bidder must be entered on the Bid submitted. The Bid shall be signed in the space provided therefore by written signature of the person or persons properly authorized to sign it. All names must be typed or printed below the signature.

10.2.2. A Bid submitted by an individual shall be signed by the Bidder or by an authorized agent.

10.2.3. Bids by partnerships must be executed in the partnership name and signed by a partner, whose title must appear under the signature and the official address of the partnership must be shown below the signature.

10.2.4. Bids by corporations must be executed in the corporate name by the president or a vice-president (or other corporate officer accompanied by evidence of authority to sign) and the corporate seal must be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation shall be shown below the signature. Such corporation must be licensed to do business in the state in which the Project is located before a Contract to do the Work embraced in the Bid can be signed. If a foreign corporation, the state under which it is incorporated must be named.

10.2.5. Bids which are signed by an attorney-in-fact for individuals, firms, partnerships or joint ventures shall have attached thereto a power-of-attorney evidencing authority to sign the Bid.

10.3. The Bid shall contain an acknowledgment of receipt of all Addenda, the numbers and dates of which shall be filled in on the Bid Form.

10.4. It is the responsibility of the Bidder to submit a neat, accurate, and complete Bid.

10.5. Bidders may submit a Bid for a combination of bids when provided in the Bid Form.

ARTICLE 11 - SUBMISSION OF BIDS

11.1. Bids shall be submitted at the time and place indicated in the Notice to Bidders and shall be enclosed in an opaque sealed envelope, marked with the Project title (and, if applicable, the designated portion of the Project for which the Bid is submitted), name and address of the Bidder, and accompanied by other required documents. If the Bid is sent through the mail or other delivery system the sealed envelope shall be enclosed in a separate envelope with the notation "BID ENCLOSED" on the face of it.

ARTICLE 12 - MODIFICATION AND WITHDRAWAL OF BID

12.1. Bids may be modified or withdrawn by notice to the party receiving Bids at the place designated for receipt of Bids prior to bid opening. Such notice shall be in writing over the signature of the Bidder.

ARTICLE 13 - AWARD OF CONTRACT(S)

13.1. DONOHUE reserves the right to reject any and all Bids, to waive any and all informalities not involving price, time or changes in the Work and to negotiate contract terms with the Successful Bidder, and the right to reject all nonconforming, nonresponsive, unbalanced or conditional Bids. Also, DONOHUE reserves the right to reject the Bid of any Bidder if DONOHUE believes that it would not be in the best interest of the Project to make an award to that Bidder, whether because the Bid is not responsive or the Bidder is unqualified or of doubtful financial ability or fails to meet any other pertinent requirements.

13.1.1. Type of Subcontract - The Subcontract awarded will be fixed unit price services type Subcontract. The prices specified shall not be increased due to increased labor or materials costs during the term of this Subcontract unless otherwise specified herein.

13.2. In evaluating Bids, DONOHUE shall consider the qualifications of the Bidders, whether or not the Bids comply with the prescribed requirements, unit prices, supplemental prices and other data as may be requested in the Bid Form or prior to the Notice of Award.

13.3. DONOHUE may consider the qualifications and experience of tier Subcontractors, Suppliers, and other persons and organizations proposed for those portions of the work as to which the identity of tier Subcontractors, Suppliers, and other persons and organizations must be submitted.

13.4. DONOHUE may conduct such investigations as DONOHUE deems necessary to assist in the evaluation of any Bid and to establish the responsibility, qualifications, and financial ability of the Bidders, proposed tier Subcontractors, Suppliers and other persons and organizations to perform and furnish the work in accordance with the Subcontract Documents to DONOHUE'S satisfaction within the prescribed time.

13.5. DONOHUE shall have the right to reject any unit prices for additions to or deductions from the work as given in the Bid, if the prices are considered excessive or unreasonable, and to accept any unit prices which may be considered fair and reasonable.

13.6. On unit price subcontracts, the total Bid price shall be the total of unit prices extended by the estimated number of units set forth in the Bid. Errors in extension will be corrected by DONOHUE providing that the unit cost is legible and can be definitely identified as complying with the item specified. An extension may not be divided by the number of units specified to determine a unit cost, if such is omitted by the Bidder. Computation of the indicated sum of any column of figures will be corrected by using the mathematical summation of the figures or corrected figures.

13.8. If the subcontract is to be awarded, it will be awarded to the lowest Bidder whose evaluation by DONOHUE indicates to DONOHUE that the award will be in the best interests of the Project and to determine the low Bidder on the basis of the total Contract Price.

13.9. If the contract is to be awarded, DONOHUE will give Successful Bidder notification at the earliest possible date.

13.10. DONOHUE is prohibited by reason of the Federal Regulations from knowingly soliciting Bids from, negotiating with or awarding subcontracts to, and approving or allowing tier subcontracts with a debarred contractor. If a Bidder, offeror or proposed Subcontractor is listed on the Consolidated List of Debarred Contractors compiled by the Federal Government, it will not be awarded the contract or be allowed to participate as a Subcontractor.

ARTICLE 14 - SUBCONTRACT SECURITY AND INSURANCE CERTIFICATION

14.1. When the Successful Bidder delivers the executed Subcontract Agreement to DONOHUE, it shall be accompanied by evidence of insurance required.

ARTICLE 15 - SIGNING OF SUBCONTRACT AGREEMENT

15.1. When DONOHUE gives a Notice of Award to the Successful Bidder, it will be accompanied by the required number of unsigned counterparts of the Subcontract Agreement with all other written Subcontract Contract Documents attached. Within 5 days after the date of the Notice of Award, SUBCONTRACTOR shall sign and deliver the required number of counterparts of the Subcontract Agreement and attached documents to DONOHUE with the required bonds and evidence of insurance required by clause H24 of the Environmental Protection Agency Acquisition Regulation (EPAAR) clauses. Within 5 days thereafter DONOHUE will deliver one fully signed counterpart to SUBCONTRACTOR. The date of award is the date of Agreement.

ARTICLE 16 - SALES TAX

16.1. Bidder shall investigate the statutory requirements for payment of sales taxes applicable to the state in which the work will be performed, and if required shall include the tax in the Bid.

16.2. If investigation indicates tax exempt status, SUBCONTRACTOR(S) shall forward this information to their Suppliers in order that the sale of such materials and equipment be properly recorded as a tax-exempt sale.

ARTICLE 17 - EQUAL EMPLOYMENT OPPORTUNITY REQUIREMENTS

17.1. The Subcontract(s) that exceeds \$10,000 shall be subject to the applicable compliance standards and procedures of 40 CFR 8, Equal Employment Opportunity.

ARTICLE 18 - "DELETED"

ARTICLE 19 - SMALL, MINORITY, WOMEN'S, AND LABOR SURPLUS AREA CONTRACTORS

19.1. The Subcontracts awarded will be subject to EPA policy and regulations regarding the increased use of small, minority, women's, and labor surplus area businesses. A copy of the clauses governing their use are included in the Federal Requirements section of this Project Manual.

ARTICLE 20 - HEALTH AND SAFETY

20.1. The site specific Health and Safety Plan (HASP) for this work is presented in Appendix G (under separate cover). SUBCONTRACTOR'S shall become familiar with HASP and to conform to its requirements. The proposal will be evaluated on the assumption that most of the field work will be performed in the level of personal protection defined in the Specification, however, provisions will be made to upgrade to level of personal protection if necessary, as outlined in the HASP.

ARTICLE 21 - REPRESENTATIONS, CERTIFICATIONS, AND OTHER STATEMENTS OF OFFERORS (FAR)

21.1 Bidders shall complete the Representations and Certification page and the appropriate parts of Federal Requirements, Representations, Certifications, and other Statements of Offerors (FAR) included in the Federal Requirements. Complete and submit the separate set attached to the Bid Form.

ARTICLE 22 - CONFLICT OF INTEREST

22.1. Bidders shall review the list of Potentially Responsible Parties (PRP) listed in Appendix G, EPAAR Clause 1552.209-71 and Clause H.21. The bidder shall identify with their bid, any dealings with the listed PRP's.

* * * END OF INSTRUCTIONS TO BIDDERS * * *

F E D E R A L
R E Q U I R E M E N T S

REPRESENTATIONS, CERTIFICATIONS, AND OTHER STATEMENTS OF OFFERORS

Clause No.	Title
52.203-2	Certificate of Independent Price Determination
52.203-4	Contingent Fee Representation and Agreement
52.204-3	Taxpayer Identification
52.209-5	Certification Regarding Debarment, Suspension, Proposed Debarment, and other Responsibility Matters
52.215-6	Type of Business Organization
52.219-1	Small Business Concern Representation
52.219-2	Small Disadvantaged Business Concern Representation
52.219-3	Women-Owned Small Business Representation
52.220-1	Preference for Labor Surplus Area Concerns
52.222-21	Certification of Nonsegregated Facilities
52.222-22	Previous Contracts and Compliance Reports
52.222-25	Affirmative Action Compliance
52.225-12	Notice of Restrictions on Contracting with Sanctioned Persons

52.203-2 Certificate of Independent Price Determination.

CERTIFICATE OF INDEPENDENT PRICE
DETERMINATION (APR 1985)

(a) The offeror certifies that -

(1) The prices in this offer have been arrived at independently, without, for the purpose of restricting competition, any consultation, communication, or agreement with any other offeror or competitor relating to (i) those prices, (ii) the intention to submit an offer, or (iii) the methods or factors used to calculate the prices offered;

(2) The prices in this offer have not been and will not be knowingly disclosed by the offeror, directly or indirectly, to any other offeror or competitor before bid opening (in the case of a sealed bid solicitation) or contract award (in the case of a negotiated solicitation) unless otherwise required by law; and

(3) No attempt has been made or will be made by the offeror to induce any other concern to submit or not to submit an offer for the purpose of restricting competition.

(b) Each signature on the offer is considered to be a certification by the signatory that the signatory-

(1) Is the person in the offeror's organization responsible for determining the prices being offered in this bid or proposal, and that the signatory has not participated and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) above; or

(2) (i) Has been authorized, in writing, to act as agent for the following principals in certifying that those principals have not participated, and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) above (insert full name of person(s) in the offeror's organization responsible for determining the prices offered in this bid or proposal, and the title of his or her position in the offeror's organization);

(ii) As an authorized agent, does certify that the principals named in subdivision (b)(2)(i) above have not participated, and will not participate, in any action contrary to subparagraphs (a)(1) through (a)(3) above; and

(iii) As an agent, has not personally participated, and will not participate, in any action contrary to subparagraphs (a)(1) through (a)(3) above.

(c) If the offeror deletes or modifies subparagraph (a)(2) above, the offeror must furnish with its offer a signed statement setting forth in detail the circumstances of the disclosure.

(End of provision)

52.203-4 Contingent Fee Representation and Agreement.

CONTINGENT FEE REPRESENTATION AND
AGREEMENT (APR 1984)

(a) Representation. The offeror represents that, except for full-time bona fide employees working solely for the offeror, the offeror-

[Note: The offeror must check the appropriate boxes. For interpretation of the representation, including the term "bona fide employee," see Subpart 3.4 of the Federal Acquisition Regulation.]

(1) has, has not employed or retained any person or company to solicit or obtain this contract and

(2) has, has not paid or agreed to pay to any person or company employed or retained to solicit or obtain this contract any commission, percentage, brokerage, or other fee contingent upon or resulting from the award of this contract.

(b) Agreement. The offeror agrees to provide information relating to the above Representation as requested by the Contracting Officer and, when subparagraph (a)(1) or (a)(2) is answered affirmatively, to promptly submit to the Contracting Officer-

(1) A completed Standard Form 119, Statement of Contingent or Other Fees, (SF 119); or

(2) A signed statement indicating that the SF 119 was previously submitted to the same contracting office, including the date and applicable solicitation or contract number, and representing that the prior SF 119 applies to this offer or quotation.

(End of provision)

52.204-3 Taxpayer Identification.

TAXPAYER IDENTIFICATION (SEP 1989)

(a) Definitions.

"Common parent," as used in this solicitation provision, means that corporate entity that owns or controls an affiliated group of corporations that files its Federal income tax returns on a consolidated basis, and of which the offeror is a member.

"Corporate status," as used in this solicitation provision, means a designation as to whether the offeror is a corporate entity, an unincorporated entity (e.g., sole proprietorship or partnership), or a corporation providing medical and health care services.

"Taxpayer Identification Number (TIN)," as used in this solicitation provision, means the number required by the IRS to be used by the offeror in reporting income tax and other returns.

(b) The offeror is required to submit the information required in paragraphs (c) through (e) of this solicitation provision in order to comply with reporting requirements of 26 U.S.C. 6041, 6041A, and 6050M and implementing regulations issued by the Internal Revenue Service (IRS). If the resulting contract is subject to the reporting requirements described in [A902(a)], the failure or refusal by the offeror to furnish the information may result in a 20 percent reduction of payments otherwise due under the contract.

(c) Taxpayer Identification Number (TIN).

- TIN: 37-1021508
- TIN has been applied for.
- TIN is not required because:

Offeror is a nonresident alien, foreign corporation, or foreign partnership that does not have income effectively connected with the conduct of a trade or business in the U.S. and does not have an office or place of business or a fiscal paying agent in the U.S.;

Offeror is an agency or instrumentality of a foreign government;

Offeror is an agency or instrumentality of a Federal, state, or local government;

Other. State basis. _____

(d) Corporate Status.

Corporation providing medical and health care services, or engaged in the billing and collecting of payments for such services;

Other corporate entity;

Not a corporate entity;

Sole proprietorship

Partnership

Hospital or extended care facility described in 26 CFR 501

(c)(3) that is exempt from taxation under 26 CFR 501(a).

(e) Common Parent.

Offeror is not owned or controlled by a common parent as defined in paragraph (a) of this clause.

Name and TIN of common parent:

Name Burlington Environmental, Inc.
TIN 91-1420891

(End of provision)

52.209-5 Certification Regarding Debarment, Suspension, Proposed Debarment, and Other Responsibility Matters.

CERTIFICATION REGARDING DEBARMENT,
SUSPENSION, PROPOSED DEBARMENT, AND
OTHER RESPONSIBILITY MATTERS (MAY 1989)

(a)(1) The Offeror certifies, to the best of its knowledge and belief, that -

(i) The Offeror and/or any of its Principals -

(A) Are are not presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any Federal agency;

(B) Have have not , within a three-year period preceding this offer, been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, state, or local) contract or subcontract; violation of Federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property; and

(C) Are are not presently indicted for, or otherwise criminally or civilly charged by a governmental entity with, commission of any of the offenses enumerated in subdivision (a)(1)(i)(B) of this provision.

(ii) The Offeror has has not , within a three-year period preceding this offer, had one or more contracts terminated for default by any Federal agency.

(2) "Principals," for the purposes of this certification, means officers; directors; owners; partners; and persons having primary management or supervisory responsibilities within a business entity (e.g., general manager; plant manager; head of a subsidiary, division, or business segment, and similar positions).

THIS CERTIFICATION CONCERNS A MATTER WITHIN THE JURISDICTION OF AN AGENCY OF THE UNITED STATES AND THE MAKING OF A FALSE, FICTITIOUS, OR FRAUDULENT CERTIFICATION MAY RENDER THE MAKER SUBJECT TO PROSECUTION UNDER SECTION 1001, TITLE 18, UNITED STATES CODE.

(b) The Offeror shall provide immediate written notice to the Contracting officer if, at any time prior to contract award, the Offeror learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

(c) A certification that any of the items in paragraph (a) of this provision exists will not necessarily result in withholding of an award under this solicitation. However, the certification will be considered in connection

with a determination of the Offeror's responsibility. Failure of the Offeror to furnish a certification or provide such additional information as requested by the Contracting Officer may render the Offeror nonresponsible.

(d) Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by paragraph (a) of this provision. The knowledge and information of an Offeror is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

(e) The certification in paragraph (a) of this provision is a material representation of fact upon which reliance was placed when making award. If it is later determined that the Offeror knowingly rendered an erroneous certification, in addition to other remedies available to the Government, the Contracting Officer may terminate the contract resulting from this solicitation for default.

(End of provision)

52.215-6 Type of Business Organization.

TYPE OF BUSINESS ORGANIZATION (JUL 1987)

The offeror or quoter, by checking the applicable box, represents that -

(a) It operates as a corporation incorporated under the laws of the State of Missouri an individual, a partnership, a nonprofit organization, or a joint venture.

(b) If the offeror or quoter is a foreign entity, it operates as an individual, a partnership, a nonprofit organization a joint venture, or a corporation, registered for business in _____ country.

(End of provision)

52.219-1 Small Business Concern Representation.

SMALL BUSINESS CONCERN REPRESENTATION

(FEB 1990)

(a) Representation. The offeror represents and certifies as part of its offer that it is, is not a small business concern and that all, not all end items to be furnished will be manufactured or produced by a small business concern in the United States, its territories or possessions, Puerto Rico, or the Trust Territory of the Pacific Islands.

(b) Definition.

"Small business concern," as used in this provision, means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts,

and qualified as a small business under the criteria and size standards in this solicitation.

(c) Notice. Under 15 U.S.C. 645(d), any person who misrepresents a firm's status as a small business concern in paragraph (a) of this clause in order to obtain a contract to be awarded under the preference programs established pursuant to Sections 8(a), 8(d), 9, or 15 of the Small Business Act or any other provision of Federal law that specifically references Section 8(d) for a definition of program eligibility, shall (1) be punished by imposition of a fine, imprisonment, or both; (2) be subject to administrative remedies; and (3) be ineligible for participation in programs conducted under the authority of the Act.

(End of provision)

52.219-2 Small Disadvantaged Business Concern Representation.

SMALL DISADVANTAGED BUSINESS CONCERN REPRESENTATION (FEB 1990)

(a) Representation. The offeror represents that it is, is not a small disadvantaged business concern.

(b) Definitions.

"Asian Pacific American," as used in this provision, means United States citizens whose origins are in Japan, China, the Philippines, Vietnam, Korea, Samoa, Guam, the U.S. Trust Territory of the Pacific Islands (Republic of Palau), the Northern Mariana Islands, Laos, Kampuchea (Cambodia), Taiwan, Burma, Thailand, Malaysia, Indonesia, Singapore, Brunei, Republic of the Marshall Islands, or the Federated States of Micronesia.

"Indian tribe," as used in this provision, means any Indian tribe, band, nation, or other organized group or community of Indians, including any Alaska Native Corporation as defined in 13 CFR 124.100 which is recognized as eligible for the special programs and services provided by the U.S. to Indians because of their status as Indians, or which is recognized as such by the State in which such tribe, band, nation, group, or community resides.

"Native American", as used in this provision means American Indians, Eskimos, Aleuts, and native Hawaiians. "Native Hawaiians in, and chartered as a not-for-profit organization by the State of Hawaii, which is controlled by Native Hawaiians, and whose business activities will principally benefit such Native Hawaiians.

"Small business concern," as used in this provision, means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria and size standards in 13 CFR 121.

"Small disadvantaged business concern," as used in this provision, means a small business concern that (a) is at least 51 percent unconditionally owned by one or more individuals who are both socially and economically disadvantaged, or a publicly owned business having at least 51 percent of its stock unconditionally owned by one or more socially and economically disadvantaged individuals and (b) has its management and daily business controlled by one or more such individuals. This term also means a small business concern that is at least 51 percent unconditionally owned by an economically disadvantaged Indian tribe or Native Hawaiian Organization, or a publicly owned business having at least 51 percent of its stock unconditionally owned by one of these entities which has its management and daily business controlled by members of an economically disadvantaged Indian tribe or Native Hawaiian Organization, and which meets the requirements of 13 CFR 124.

"Subcontinent Asian Americans," as used in this provision, means United States citizens whose origins are in India, Pakistan, Bangladesh, Sri Lanka, Bhutan, or Nepal.

(c) Qualified groups. The offeror shall presume that socially and economically disadvantaged individuals include Black Americans, Hispanic Americans, Native Americans, Asian-Pacific Americans, Subcontinent Asian Americans, and other individuals found to be qualified by SBA under 13 CFR 124. The offeror shall presume that socially and economically disadvantaged entities also include Indian tribes and Native Hawaiian organizations.

(End of provision)

52.219-3 Women-Owned Small Business Representation.

WOMEN-OWNED SMALL BUSINESS REPRESENTATION (APR 1984)

(a) Representation. The offeror represents that it [] is, [] is not a women-owned small business concern.

(b) Definitions.

"Small business concern," as used in this provision, means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria and size standards in 13 CFR 121.

"Women-owned," as used in this provision, means a small business that is at least 51 percent owned by a woman or women who are U.S. citizens and who also control and operate the business.

(End of provision)

52.220-1 Preference for Labor Surplus Area Concerns.

PREFERENCE FOR LABOR SURPLUS AREA
CONCERNS (APR 1984)

(a) This acquisition is not a set-aside for labor surplus area (LSA) concerns. However, the offeror's status as such a concern may affect (1) entitlement to award in case of tie offers, or (2) offer evaluation in accordance with the Buy American Act clause of this solicitation. In order to determine whether the offeror is entitled to a preference under (1) or (2) above, the offeror must identify, below, the LSA in which the costs to be incurred on account of manufacturing or production (by the offeror or the first-tier subcontractors) amount to more than 50 percent of the contract price.

(b) Failure to identify the locations as specified above will preclude consideration of the offeror as an LSA concern. If the offeror is awarded a contract as an LSA concern and would not have otherwise qualified for award, the offeror shall perform the contract or cause the contract to be performed in accordance with the obligations of an LSA concern.

(End of provision)

52.222-21 Certification of Nonsegregated Facilities.

CERTIFICATION OF NONSEGREGATED
FACILITIES (APR 1984)

(a) "Segregated facilities," as used in this provision, means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees, that are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, or national origin because of habit, local custom, or otherwise.

(b) By the submission of this offer, the offeror certifies that it does not and will not maintain or provide for its employees any segregated facilities at any of its establishments, and that it does not and will not permit its employees to perform their services at any location under its control where segregated facilities are maintained. The offeror agrees that a breach of this certification is a violation of the Equal Opportunity clause in the contract.

(c) The offeror further agrees that (except where it has obtained identical certifications from proposed subcontractors for specific time periods) it will--

(1) Obtain identical certifications from proposed subcontractors before the award of subcontracts under which the subcontractor will be subject to the Equal Opportunity clause;

(2) Retain the certifications in the files; and

(3) Forward the following notice to the proposed subcontractors (except if the proposed subcontractors have submitted identical certifications for specific time periods):

NOTICE TO PROSPECTIVE SUBCONTRACTORS OF REQUIREMENT FOR CERTIFICATIONS OF NONSEGREGATED FACILITIES.

A Certification of Nonsegregated Facilities must be submitted before the award of a subcontract under which the subcontractor will be subject to the Equal Opportunity clause. The certification may be submitted either for each subcontract or for all subcontracts during a period (i.e., quarterly, semi-annually, or annually).

NOTE: The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001.

(End of provision)

52.222-22 Previous Contracts and Compliance Reports.

**PREVIOUS CONTRACTS AND COMPLIANCE
REPORTS (APR 1984)**

The offeror represents that--

(a) It [] has, [] has not, participated in a previous contract or subcontract subject either to the Equal Opportunity clause of this solicitation, the clause originally contained in Section 310 of Executive Order No. 10925, or the clause contained in Section 201 of Executive Order No. 11114;

(b) It [] has, [] has not, filed all required compliance reports; and

(c) Representations indicating submission of required compliance reports, signed by proposed subcontractors, will be obtained before subcontract awards.

(End of provision)

52.222-25 Affirmative Action Compliance.

As prescribed in 22.810(d), insert the following provision in solicitations, other than those for construction, when a contract is contemplated that will include the clause at 52.222-26, Equal Opportunity:

AFFIRMATIVE ACTION COMPLIANCE (APR 1984)

The offeror represents that (a) it [] has developed and has on file, [] has not developed and does not have on file, at each establishment, affirmative action programs required by the rules and regulations of the Secretary of Labor (41 CFR 60-1 and 60-2), or (b) it [] has not previously had contracts subject to the written affirmative action programs requirement of the rules and regulations of the Secretary of Labor.

(End of provision)

52.225-12 Notice of Restrictions on Contracting with Sanctioned Persons.

NOTICE OF RESTRICTIONS ON CONTRACTING
WITH SANCTIONED PERSONS (MAY 1989)

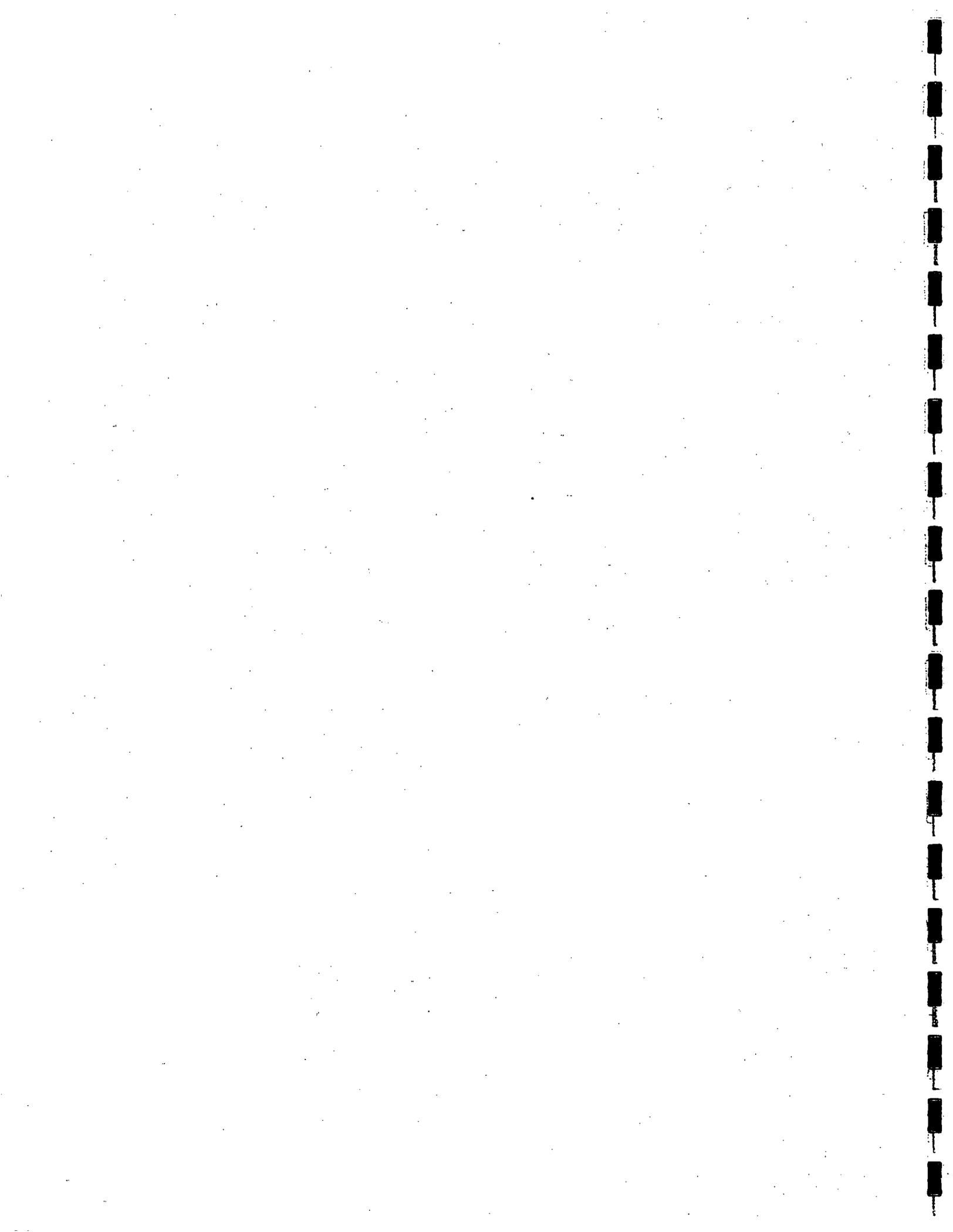
(a) Statutory prohibitions have been imposed on contracting with sanctioned persons, as specified in Federal Acquisition Regulation (FAR) 52.225-13, Restrictions on Contracting with Sanctioned Persons.

(b) By submission of this offer, the Offeror represents that no products or services, except those listed in this paragraph (b), delivered to the Government under any contract resulting from this solicitation will be products or services of a sanctioned person, as defined in the clause referenced in paragraph (a) of this provision, unless one of the exceptions in paragraph (d) of the clause at FAR 52.225-13 applies.

<u>Product or Service</u>	<u>Sanctioned Person</u>
_____	_____
_____	_____
_____	_____

(List as necessary)

(End of provision)



B I D F O R M

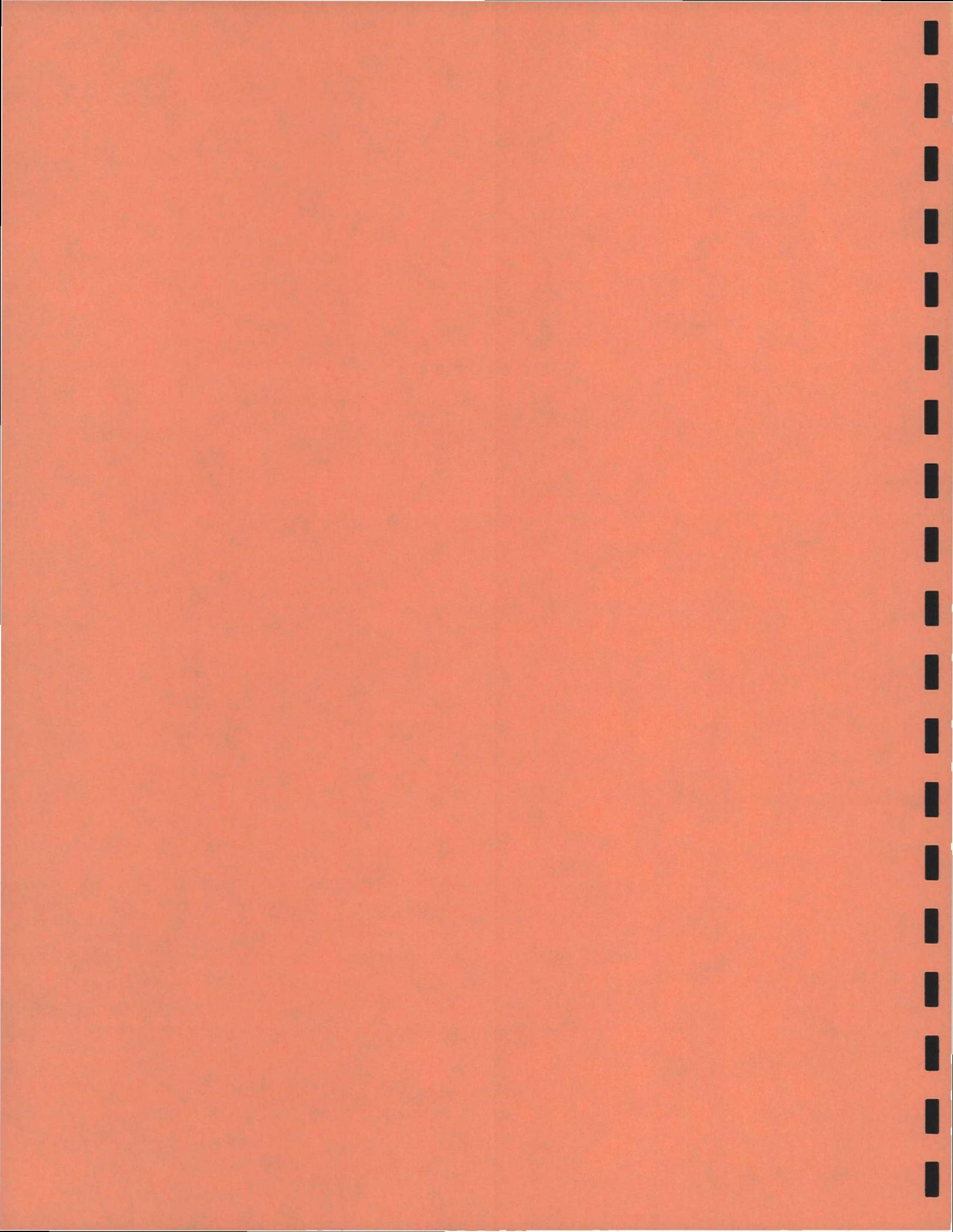


EXHIBIT A

BID FORM

PROJECT IDENTIFICATION:

John Mathes & Associates, Inc
Name of Bidder

Soil Borings and Monitoring Well Installation
and Related Activities for the
Himco Dump Superfund Site
Elkhart, Indiana

PROJECT NUMBER: 20026

SUBCONTRACT NUMBER: 17-5L45-2

THIS BID IS SUBMITTED TO:

Donohue & Associates, Inc.
Engineers, Architects & Scientists
111 North Canal Street, Suite 305
Chicago, IL 60606

(hereinafter called DONOHUE)

1. The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into a Subcontract Agreement with DONOHUE in the form included with Subcontract Documents, including attachments thereto, to perform all Work as specified or indicated in the Subcontract Documents for the Subcontract Price and within the Subcontract Time indicated in this Bid and in accordance with the other terms and conditions of the Subcontract Documents.
2. Bidder accepts all of the terms and conditions of the Subcontract Documents. This Bid will remain subject to acceptance for the period specified in the Request for Proposal. Bidder will sign and submit the Subcontract Agreement with evidence of insurance, and other documents required by the Subcontract Documents within 5 days after the date of Award.
3. In submitting this Bid, Bidder represents, as more fully set forth in the Subcontract Agreement, that:
 - a. They have reviewed Clause H.17, Notification or Conflict of Interest Regarding Personnel, EPAAR Clause 1552.209-71, Organizational Conflicts of Interest, and certify that they have no known conflicts of interest.
 - b. Bidder has examined the Subcontract Documents, including attachments thereto, and the following Addenda (receipt of all which is hereby acknowledged):

<u>Date</u>	<u>Number</u>
<u>10-2-90</u>	<u>1</u>
<u>10-10-90</u>	<u>2</u>
<u> </u>	<u> </u>
<u> </u>	<u> </u>

- c. Bidder has familiarized itself with the nature and extent of the Subcontract Documents, Work, and all local conditions and Laws and Regulations that in any manner may affect cost, progress, and performance of the Work.
 - d. Bidder has given DONOHUE written notice of all conflicts, errors or discrepancies that it has discovered in the Subcontract Documents and the written resolution thereof by DONOHUE is acceptable to Bidder.
 - e. This Bid is genuine and not made in the interest or on behalf of any undisclosed person, firm or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; Bidder has not solicited or induced any person, firm or a corporation to refrain from bidding; and Bidder has not sought by collusion to obtain for itself any advantage over any other Bidder or over DONOHUE.
 - f. Bidder agrees to comply with DONOHUE'S Small, Minority, and Women's Minority Business Enterprise requirements as provided for in the Federal Regulation and has completed and enclosed the Representations and Certifications forms provided in the Subcontract Documents.
 - g. Bidder certifies that Bidder is not barred from bidding on this contract as a result of a conviction for the violation of Federal laws prohibiting bid-rigging or bid-rotating, and is not listed on the consolidated list of debarred contractors as compiled by the Federal Government.
 - h. Bidder certifies that Bidder will comply with requirements of Site Specific Health and Safety Plan (HASP) provided with the Subcontract Documents.
4. Bidder will complete the Work for the following prices:

UNIT PRICE SCHEDULE

Quantities are not guaranteed. Final payment will be based on actual quantities.

<u>Item</u>	<u>Estimated Quantity</u>	<u>Unit Cost</u>	<u>Total</u>
1. Mobilization-Demobilization per Lump Sum CME 75 & IM60			\$ <u>6,700.00</u>
2. Per diem expenses, 2 man drilling crew, per day, 25 days	<u>25 days</u>	\$ <u>130.00</u>	\$ <u>3,250.00</u>
Per diem expenses, 2 man test pit excavation crew, per day, 10 days	<u>10 days</u>	\$ <u>130.00</u>	\$ <u>1,300.00</u>
3. Soil Boring for New Wells			
A. 6 ea, Observation Wells			
1. Hollow Stem Auger Boring With Continuous Split Spoon Sampling and Sampler Decontamination			
a. 0-20 ft depth interval, per ft	<u>120 ft</u>	\$ <u>18.00</u>	\$ <u>2,160.00</u>
b. 20-30 ft depth interval, per ft	<u>15 ft</u>	\$ <u>18.00</u>	\$ <u>270.00</u>
B. 2 ea, Intermediate Piezometers			
1. Air Rotary Blind Drill for Well Installation Only			
a. 0-20 ft depth interval, per ft	<u>40 ft</u>	\$ <u>28.00</u>	\$ <u>1,120.00</u>
b. 20-40 ft depth interval, per ft	<u>40 ft</u>	\$ <u>28.00</u>	\$ <u>1,120.00</u>
c. 40-60 ft depth interval, per ft	<u>40 ft</u>	\$ <u>28.00</u>	\$ <u>1,120.00</u>
d. 60-80 ft depth interval, per ft	<u>40 ft</u>	\$ <u>28.00</u>	\$ <u>1,120.00</u>
e. 80-100 ft depth interval, per ft	<u>40 ft</u>	\$ <u>28.00</u>	\$ <u>1,120.00</u>
f. 100-120 ft depth interval, per ft	<u>20 ft</u>	\$ <u>28.00</u>	\$ <u>1,120.00</u>

<u>Item</u>	<u>Estimated Quantity</u>	<u>Unit Cost</u>	<u>Total</u>
Welded 8-inch			
2. Dedicated XXXXXXXXXXXXXXXXXXXX 10 Steel Casing, per LF			
a. 0-20 ft depth interval, per ft	<u>40 ft</u>	\$ <u>11.00</u>	\$ <u>440.00</u>
b. 20-40 ft depth interval, per ft	<u>40 ft</u>	\$ <u>11.00</u>	\$ <u>440.00</u>
c. 40-60 ft depth interval, per ft	<u>40 ft</u>	\$ <u>11.00</u>	\$ <u>440.00</u>
d. 60-80 ft depth interval, per ft	<u>40 ft</u>	\$ <u>11.00</u>	\$ <u>440.00</u>
e. 80-100 ft depth interval, per ft	<u>40 ft</u>	\$ <u>11.00</u>	\$ <u>440.00</u>
f. 100-120 ft depth interval, per ft	<u>40 ft</u>	\$ <u>11.00</u>	\$ <u>440.00</u>
C. 2 ea. Deep Pirzometers			
1. Air Rotary Blind Drill for Well Installation Only			
a. 0-20 ft depth interval, per ft	<u>40 ft</u>	\$ <u>28.00</u>	\$ <u>1,120.00</u>
b. 20-40 ft depth interval, per ft	<u>40 ft</u>	\$ <u>28.00</u>	\$ <u>1,120.00</u>
c. 40-60 ft depth interval, per ft	<u>40 ft</u>	\$ <u>28.00</u>	\$ <u>1,120.00</u>
d. 60-80 ft depth interval, per ft	<u>40 ft</u>	\$ <u>28.00</u>	\$ <u>1,120.00</u>
e. 80-100 ft depth interval, per ft	<u>40 ft</u>	\$ <u>28.00</u>	\$ <u>1,120.00</u>
f. 100-120 ft depth interval, per ft	<u>40 ft</u>	\$ <u>28.00</u>	\$ <u>1,120.00</u>
g. 120-140 ft depth interval, per ft	<u>40 ft</u>	\$ <u>28.00</u>	\$ <u>1,120.00</u>
h. 140-160 ft depth interval, per ft	<u>40 ft</u>	\$ <u>32.00</u>	\$ <u>1,280.00</u>
i. 160-180 ft depth interval, per ft	<u>40 ft</u>	\$ <u>32.00</u>	\$ <u>1,280.00</u>
j. 180-200 ft depth interval, per ft	<u>20 ft</u>	\$ <u>32.00</u>	\$ <u>640.00</u>
Welded 8-inch			
2. Dedicated XXXXXXXXXXXXXXXXXXXX 10 Steel Casing, per LF			
a. 0-20 ft depth interval, per ft	<u>40 ft</u>	\$ <u>11.00</u>	\$ <u>440.00</u>
b. 20-40 ft depth interval, per ft	<u>40 ft</u>	\$ <u>11.00</u>	\$ <u>440.00</u>

<u>Item</u>	<u>Estimated Quantity</u>	<u>Unit Cost</u>	<u>Total</u>
c. 40-60 ft depth interval, per ft	<u>40 ft</u>	\$ <u>11.00</u>	\$ <u>440.00</u>
d. 60-80 ft depth interval, per ft	<u>40 ft</u>	\$ <u>11.00</u>	\$ <u>440.00</u>
e. 80-100 ft depth interval, per ft	<u>40 ft</u>	\$ <u>11.00</u>	\$ <u>440.00</u>
f. 100-120 ft depth interval, per ft	<u>40 ft</u>	\$ <u>11.00</u>	\$ <u>440.00</u>
g. 120-140 ft depth interval, per ft	<u>40 ft</u>	\$ <u>11.00</u>	\$ <u>440.00</u>
h. 140-160 ft depth interval, per ft	<u>40 ft</u>	\$ <u>11.00</u>	\$ <u>440.00</u>
i. 160-180 ft depth interval, per ft	<u>40 ft</u>	\$ <u>11.00</u>	\$ <u>440.00</u>
j. 180-200 ft depth interval, per ft	<u>20 ft</u>	\$ <u>11.00</u>	\$ <u>220.00</u>
4. Well Construction			
A. 20-ft, Observation Wells, per ft	<u>120 L.F.</u> XXXX	\$ <u>61.00</u>	\$ <u>7,320.00</u>
B. 100-ft, Intermediate Piezometers, per ft	<u>200 L.F.</u> XXXX	\$ <u>29.00</u>	\$ <u>5,800.00</u>
C. 175-ft, Deep Piezometers, per ft	<u>350 L.F.</u> XXXX	\$ <u>23.00</u>	\$ <u>8,050.00</u>
5. Soil Boring for Stratigraphic Information			
A. 4 ea, Soil Borings			
1. Rotary wash/mud rotary with split spoon sampling at 5-ft intervals			
a. 0-20 ft depth interval, per ft	<u>80 ft</u>	\$ <u>24.00</u>	\$ <u>1,920.00</u>
b. 20-40 ft depth interval, per ft	<u>80 ft</u>	\$ <u>24.00</u>	\$ <u>1,920.00</u>
c. 40-60 ft depth interval, per ft	<u>80 ft</u>	\$ <u>24.00</u>	\$ <u>1,920.00</u>
d. 60-80 ft depth interval, per ft	<u>80 ft</u>	\$ <u>26.00</u>	\$ <u>2,080.00</u>
e. 80-100 ft depth interval, per ft	<u>80 ft</u>	\$ <u>26.00</u>	\$ <u>2,080.00</u>
f. 100-120 ft depth interval, per ft	<u>80 ft</u>	\$ <u>34.00</u>	\$ <u>2,720.00</u>
g. 120-140 ft depth interval, per ft	<u>80 ft</u>	\$ <u>34.00</u>	\$ <u>2,720.00</u>

<u>Item</u>	<u>Estimated Quantity</u>	<u>Unit Cost</u>	<u>Total</u>
h. 140-160 ft depth interval, per ft	<u>80 ft</u>	\$ <u>34.00</u>	\$ <u>2,720.00</u>
i. 160-180 ft depth interval, per ft	<u>80 ft</u>	\$ <u>34.00</u>	\$ <u>2,720.00</u>
j. 180-200 ft depth interval, per ft	<u>40 ft</u>	\$ <u>34.00</u>	\$ <u>1,360.00</u>
2. Additional split spoon samples (optional)			
a. 0-20 ft depth interval, per ft		\$ <u>24.00</u>	
b. 20-40 ft depth interval, per ft		\$ <u>24.00</u>	
c. 40-60 ft depth interval, per ft		\$ <u>38.00</u>	
d. 60-80 ft depth interval, per ft		\$ <u>38.00</u>	
e. 80-100 ft depth interval, per ft		\$ <u>50.00</u>	
f. 100-120 ft depth interval, per ft		\$ <u>75.00</u>	
g. 120-140 ft depth interval, per ft		\$ <u>75.00</u>	
h. 140-160 ft depth interval, per ft		\$ <u>75.00</u>	
i. 160-180 ft depth interval, per ft		\$ <u>75.00</u>	
j. 180-200 ft depth interval, per ft		\$ <u>75.00</u>	
3. Additional Shelby tube samples			
a. 0-20 ft depth interval, per sample	<u>1</u>	\$ <u>140.00</u>	\$ <u>140.00</u>
b. 20-40 ft depth interval, per sample	<u>1</u>	\$ <u>140.00</u>	\$ <u>140.00</u>
c. 40-60 ft depth interval, per sample	<u>1</u>	\$ <u>202.00</u>	\$ <u>202.00</u>
d. 60-80 ft depth interval, per sample	<u>1</u>	\$ <u>202.00</u>	\$ <u>202.00</u>
e. 80-100 ft depth interval, per sample	<u>1</u>	\$ <u>265.00</u>	\$ <u>265.00</u>
f. 100-120 ft depth interval, per sample	<u>1</u>	\$ <u>265.00</u>	\$ <u>265.00</u>
g. 120-140 ft depth interval, per sample	<u>1</u>	\$ <u>390.00</u>	\$ <u>390.00</u>
h. 140-160 ft depth interval, per sample	<u>1</u>	\$ <u>390.00</u>	\$ <u>390.00</u>

<u>Item</u>	<u>Estimated Quantity</u>	<u>Unit Cost</u>	<u>Total</u>
i. 150-160 ft depth interval, per sample	<u>1</u>	\$ <u>453.00</u>	\$ <u>453.00</u>
j. 180-200 ft depth interval, per sample	<u>1</u>	\$ <u>515.00</u>	\$ <u>515.00</u>
6. Boring Abandonment			
A. Soil Borings, per ft	<u>780 ft</u>	\$ <u>7.25</u>	\$ <u>5,655.00</u>
7. Shelby Tube Sampling of Landfill Cap			
A. Push Shelby Tubes into Landfill Cap 3-ft long 3-in. dia at depth of 2- to 5-ft	<u>7</u>	\$ <u>75.00</u>	\$ <u>525.00</u>
8. Decontamination and Containerization			
A. Steam Cleaning 1200 drums , Per Well Location per location	<u>7 ea</u>	\$ <u>500.00</u>	\$ <u>3,500.00</u>
B. 55-gal DOT-Approved Drums, per drum	<u>25 ea</u>	\$ <u>55.00</u>	\$ <u>1,375.00</u>
C. Steam Clean Equipment between Test Pit Locations	<u>20 ea</u>	\$ <u>110.00</u>	\$ <u>2,200.00</u>
9. 8 hours, Standby-Time, (Optional), per hour	<u>8 hrs</u>	\$ <u>215.00</u>	\$ <u>1,720.00</u>
10. Site Structures			
A. Construction of Equipment Decon- tamination Pad as Specified in Section 02910	<u>1</u>	\$ <u>1,200.00</u>	\$ <u>1,200.00</u>
B. Construction of Drum Storage Area as Specified in Section 02910	<u>1</u>	\$ <u>2,500.00</u>	\$ <u>2,500.00</u>
11. Personnel Protection			
A. 10 days, Level C Protection and Equipment, Per Day, (Optional)	<u>10 days</u>	\$ <u>130.00</u>	\$ <u>1,300.00</u>
B. 10 days, Level B Protection and Equipment, per day (Optional)	<u>10 days</u>	\$ <u>285.00</u>	\$ <u>2,850.00</u>
12. Test Pit Excavation (Optional)			
A. Test Pit Excavation - Zone 1 (0 to 3'0" depth) (Level B)(Optional), 20 locations		\$ <u>100.00</u>	\$ <u>100.00</u>

H. Test Pit Excavation - Zone 2 (3'1" to 6'0" depth) (Level B) (Optional), 20 locations	\$ <u>100.00</u>	\$ <u>100.00</u>
C. Test Pit Excavation - Zone 3 (6'1" to 9'0" depth) (Level B) (Optional), 20 locations	\$ <u>100.00</u>	\$ <u>100.00</u>
D. Test Pit Excavation - Zone 4 (9'1" to 12'0" depth) (Level B) (Optional), 20 locations	\$ <u>100.00</u>	\$ <u>100.00</u>
E. Test Pit Excavation - Zone 5 (12'1" to 15'0" depth) (Level B) (Optional), 20 locations	\$ <u>100.00</u>	\$ <u>100.00</u>

13. Well Development

A. 20-ft Observation Wells, Per Well (20 Gallons per well)	\$ <u>70.00</u>	\$ <u>70.00</u>
B. 100-ft Intermediate Piezometers, Per Well (100 Gallons Per Well)	\$ <u>140.00</u>	\$ <u>140.00</u>
C. 175-ft Deep Piezometers, Per Well (200 Gallons Per Well)	\$ <u>280.00</u>	\$ <u>280.00</u>

TOTAL FIXED PRICE (ITEMS 1 THROUGH 13) One Hundred & Eight Thousand, Three Hundred
Sixty Seven Dollars (dollars - written) (\$ 108,367.00) (figures)

1. DONOHUE reserves the right to add or delete up to 25 percent of quantities from unit price item without effecting unit price.
2. DONOHUE reserves the right to delete optional items without effecting unit prices. The total price will be reduced accordingly.
3. Soil boring includes sampling and sampler decontamination as specified in Specifications. This includes use of 1-in. stainless steel split spoon sampler, 2 and 3-in. steel split spoon samplers, and includes performing standard penetration tests.
4. Contract Price for the sum of Bid Items 1 through 13 will be used in evaluating the Bids. Contract Price will be the Total Fixed Contract Price for the sum of Bid Items 1 through 13.
5. Bidder agrees that the Work on this Subcontract will begin as set forth in the Notice to Proceed and shall be Completed within 60 calendar days after the date when the Subcontract Time commences to run and ready for final payment in accordance with the Subcontract Documents.

6. The following documents are attached to and made a condition of this Bid:
- a. A tabulation of tier Subcontractors, Suppliers, and other persons and organizations required to be identified in this Bid.
 - b. Methodology outlined in Instruction to Bidders, Article 6 - "Bidding Requirements".
 - c. MBE/WBE/SBE compliance with affirmative step requirements as described in the Federal Requirements.
 - d. Samples of proposed format of geotechnical test results.
 - e. Representations, Certifications, and other Statements of Offerors (FAR), forms attached.
7. Communications concerning this Bid shall be addressed to the Bidder as indicated below:

Name: John Mathes & Associates, Inc.

Address: 210 West Sand Bank Road

State: Columbia, Illinois 62236

Telephone No.: (618) 281-7173

8. The terms used in this Bid which are defined in the Subcontract Documents and have the meanings assigned to them in the Subcontract Documents.

SUBMITTED ON October 12, _____, 1990

SUBCONTRACTOR'S LICENSE NO. _____
(If required by state or municipal law)



I hereby certify that as Bidder I/We have examined and carefully prepared this Bid from the Bidding Documents, including attachments thereto, and have checked the same in detail before submitting this Bid, and that all statements herein are made on behalf of:

An Individual

By (Written) _____ (SEAL)
(Typed) (Individual's Name)

doing business as _____
(Firm Name)

Business address: _____

Phone No.: _____

A Partnership

By _____ (SEAL)
(Firm Name)

Signature (Written) _____
(General Partner)

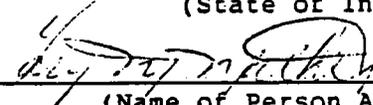
Business address: _____

Phone No.: _____

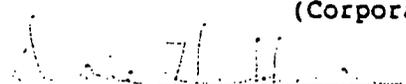
A Corporation

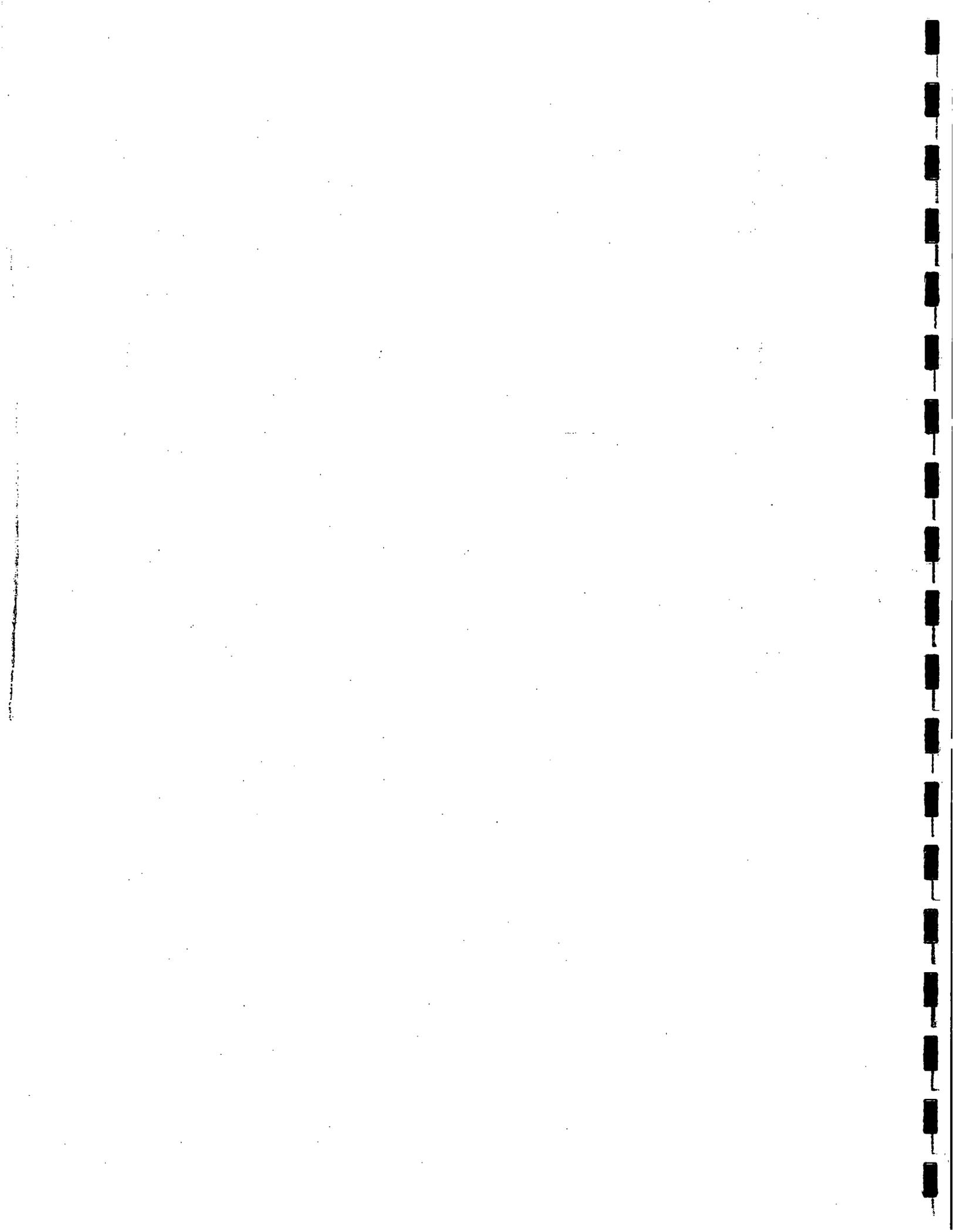
By John Mathes & Associates, Inc.
(Corporation Name)

Missouri
(State of Incorporation)

By (Written)  _____
(Typed) (Name of Person Authorized to Sign)
Gary M. Mathes
President

(Title) (Corporate Seal)

Attest (Written)  _____
(Typed) Diane Huffman (Secretary)



Business address: _____

Phone No.: _____

A Joint Venture

By (Written) _____
(Typed) (Name)

(Address)

By (Written) _____
(Typed) (Name)

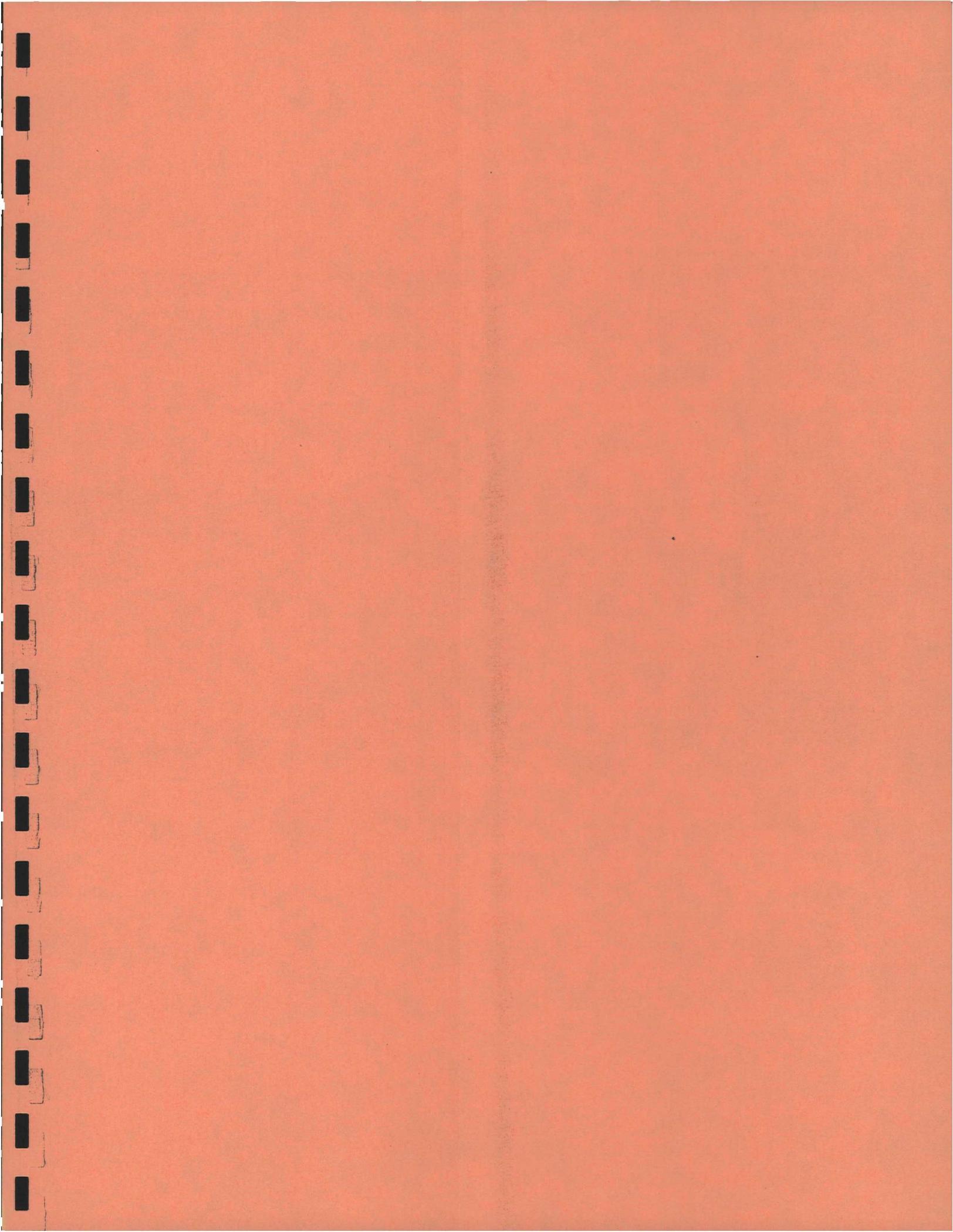
(Address)

(Each joint venturer must sign. The manner of signing for each individual, partnership, and corporation that is a party to the joint venture should be in the manner indicated above).

(Bidders shall not add any conditions or qualifying statements to this Bid as Bid may be declared irregular as being not responsive to the Subcontract Documents. BIDDERS SHALL USE THIS BID FORM IN SUBMITTING THEIR BIDS.)



SUBCONTRACT
AGREEMENT



SUBCONTRACT AGREEMENT

THIS SUBCONTRACT AGREEMENT is dated as of the 31st day of October in the year 1990 by and between Donohue & Associates, Inc. (hereinafter called

DONOHUE) and John Mathes & Associates, Inc
(hereinafter called SUBCONTRACTOR).

DONOHUE and SUBCONTRACTOR, in consideration of the mutual covenants hereinafter set forth, agree as follows:

ARTICLE 1 - WORK

1.1. SUBCONTRACTOR shall complete all Work as specified or indicated in the Subcontract Documents. The Work is generally described as constructing and installing new monitoring wells, completing soil boring, taking shelly tubes, and utilization of cone penetration testing.

1.2. The Project, for which the Work under the Subcontract Documents may be the whole or only a part, is based on requirements placed upon DONOHUE in the performance of its Prime Contract 68-W8-0093 with the Environmental Protection Agency (EPA) and is generally described as follows:

Soil Borings and Monitoring Well Installation
And Related Activities for the
Himco Dump Superfund Site
Elkhart, Indiana

ARTICLE 2 - DONOHUE

2.1. The following authorized representatives are hereby designated for this Subcontract:

2.1.1. Contacts with DONOHUE which affect the Subcontract rates, schedules, statement of work and subcontract terms and conditions shall be made with the contractual representative. No changes to this Subcontract shall be binding upon DONOHUE unless incorporated in a written modification to the Subcontract and signed by DONOHUE'S contractual representative. DONOHUE'S contractual representative is Mr. Roman M. Gau.

2.1.2. The Work set forth within these Subcontract Documents will be performed under the direction of DONOHUE'S technical representative. When, in SUBCONTRACTOR'S opinion, such technical direction constitutes a substantive change to the Subcontract Agreement, DONOHUE'S contractual representative shall be notified immediately requesting authorization for such change. Until such authorization is granted by DONOHUE'S contractual representative, SUBCONTRACTOR shall perform in accordance with the Subcontract agreement as written. If authorization is granted by DONOHUE'S contractual representative, it will be provided in the Change Order form included in Appendix B.

ARTICLE 3 - CONTRACT TIME

3.1. The Work shall commence within 7 calendar days from the Notice to Proceed and shall be complete and ready for final payment in accordance with FAR 52.232.1 within 45 calendar days after the Notice to Proceed.

ARTICLE 4 - SUBCONTRACT PRICE

4.1. DONOHUE shall pay SUBCONTRACTOR for the completion of the Work in accordance with the Subcontract Documents as shown in the SUBCONTRACTOR'S Bid Form, hereto attached as Exhibit "A", as accepted by DONOHUE. This subcontract is fully funded in the amount of \$108,916.00 including profit through the duration of the Subcontract. Unless the price of this Subcontract is amended in writing by mutual agreement of the parties, DONOHUE is not obligated to compensate SUBCONTRACTOR beyond the funded amount.

ARTICLE 5 - PAYMENT PROCEDURES

5.1. Application for Payment shall be submitted to DONOHUE, in triplicate to:

Donohue & Associates, Inc.
Attn: Mr. Patrick Butler
111 North Canal Street
Suite 305
Chicago, IL 60606

Payments:

5.2. DONOHUE will make payments monthly on account of the Subcontract Unit Price on the basis of SUBCONTRACTOR'S Applications for Payment each month. All payments will be on the basis of the number of units of work completed, and accepted by DONOHUE.

Final Payment:

5.3. Upon final completion, receipt of final reports, and acceptance of the Work in accordance with the terms of the Subcontract and FAR 52.232.1, DONOHUE shall pay the remainder due to SUBCONTRACTOR for completed work not previously paid, up to the Subcontract Price.

ARTICLE 6 - INTEREST

All moneys not paid when due as provided in FAR 52.232-17 shall bear interest as provided in FAR 52.232-23.

ARTICLE 7 - SUBCONTRACT REPRESENTATIONS

In order to induce DONOHUE to enter into this Agreement, SUBCONTRACTOR makes the following representations:

7.1. SUBCONTRACTOR has familiarized itself with the nature and extent of the Subcontract Documents, Work, and Laws and Regulations that in any manner may affect cost, progress, performance or furnishing of the Work.

ARTICLE 8 - CONTRACT DOCUMENTS

The Contract Documents which comprise the entire Agreement between DONOHUE and SUBCONTRACTOR concerning the Work consist of the following:

- 8.1. This Agreement.
- 8.2. Exhibits to this Agreement.
- 8.3. Notice to Proceed.
- 8.4. Federal Acquisition Regulations (FAR) Clauses, pages FAR-1 through FAR-5.
- 8.5. Environmental Protection Agency Acquisition Regulations (EPAAR) Clauses, pages EPAAR-1 through EPAAR-9.
- 8.6. Specifications consisting of divisions and pages listed in the General Table of Contents.
- 8.7. Addenda numbers 1 to 3, inclusive.
- 8.8. Instructions to Bidders.
- 8.9. Federal Requirements, - "Representations and Certifications", pages FR-1 through FR-12.
- 8.10. SUBCONTRACTOR'S Bid marked Exhibit "A", pages B-1 through B-8.
- 8.11. Post-Bid documentation submitted by CONTRACTOR prior to Notice of Award (Pages 1 to 6, inclusive.)
- 8.12. Appendix A, "National Enforcement Investigations Center Policies and Procedures."
- 8.13. Appendix B, Change Order Form.
- 8.14. Appendix C, General Location Map.
- 8.15. Appendix D, General Boring and Well Locations.
- 8.16. Appendix E, Summary of Boring and Well Requirements.
- 8.17. Appendix F, Typical Well Construction Diagrams.
- 8.18. Appendix G (under separate cover), Site Specific Health and Safety Plan (HASP).

8.19. Appendix H Listing of Potentially Responsible Parties

8.20 Appendix I Daily Pay Sheet

8.21. The following which may be delivered or issued after the Effective Date of the Agreement and are not attached hereto: All Written Amendments and other documents amending, modifying, or supplementing the Subcontract Documents.

8.22. There are no Subcontract Documents other than those listed above in this Article 8. The Subcontract Documents may only be amended, modified or supplemented as provided above in Article 2.

ARTICLE 9 - DISCLOSURE

9.1. SUBCONTRACTOR shall not disclose information concerning work under this Subcontract to any third party, unless such disclosure is necessary for the performance of the subcontract effort. Should it be necessary to disclose information to a third party such party shall agree to hold such information as confidential. No news releases, public announcement, denial or confirmation of any part of the subject matter of this Subcontract or any phase of any program hereunder shall be made without prior consent of DONOHUE. The restrictions of this paragraph shall continue in effect upon completion or termination of this Subcontract for such period of time as may be mutually agreed upon in writing by the parties. In the absence of a written established period, no disclosure is authorized. Failure to comply with provisions of this Clause may be cause for default termination of this Subcontract.

ARTICLE 10 - KEY PERSONNEL

10.1. For purposes of this clause, "Key Personnel" are defined as those individuals who are mutually recognized by DONOHUE and SUBCONTRACTOR as essential to the successful completion and execution of this Subcontract.

10.2. Personnel designated as "Key Personnel" shall be assigned to the extent necessary for the timely completion of the task to which assigned. Any substitution or reassignment involving SUBCONTRACTORS "Key Personnel" assigned to this work shall be made only with persons of equal abilities and qualifications and is subject to prior approval of DONOHUE, in writing.

10.3. DONOHUE reserves the right to direct the removal of any individual assigned to this Subcontract.

Subcontractors Key Personnel are: CHUCK HARRISS

ARTICLE 11 - INDEMNIFICATION

11.1. SUBCONTRACTOR shall indemnify and save DONOHUE harmless from and against any and all liability for injury to persons or property occasioned by a negligent act, omission or willful misconduct by the Seller, its lower-tier subcontractors, agents, or employees, including any and all expense, legal or otherwise, incurred by Donohue in the defense or any claim or suit arising out

of the work done under this Subcontract; provided, however, that the Subcontractor nor its tier subcontractor shall be liable for injury to persons or property caused by the negligent act or omission or willful misconduct of DONOHUE, its agents or employees.

11.2. DONOHUE shall promptly notify SUBCONTRACTOR of any claim against DONOHUE which is covered by this indemnification provision and shall authorize representatives of SUBCONTRACTOR to defend or settle subject to DONOHUE'S review any such claim or suit and to represent DONOHUE in, or to take charge of, any litigation in connection therewith.

ARTICLE 12 - (NOT APPLICABLE)

ARTICLE 13 - NONWAIVER OF RIGHTS

13.1. The failure of DONOHUE to insist upon strict performance of any of the terms and conditions in the Subcontract or to exercise any rights or remedies, shall not be construed as establishing a precedence nor in any way prejudice its rights to assert any of the same or to rely on any such terms or conditions at any time thereafter. The invalidity in whole or in part of any term or condition of this Subcontract shall not affect the validity of the other parts hereof.

ARTICLE 14 - GENERAL RELATIONSHIP

14.1. SUBCONTRACTOR agrees that in all matters relating to this Subcontract it shall be acting as an independent contractor and shall assume and pay all liabilities and perform all obligations imposed with respect to the performance of this Subcontract. SUBCONTRACTOR shall have no right, power or authority to credit any obligation, expressed or implied, on behalf of DONOHUE and the Government and shall have no authority to represent DONOHUE as an agent.

ARTICLE 15 - MISCELLANEOUS

15.1. No assignment by a party hereto of any rights under or interests in the Subcontract Documents will be binding on another party hereto without the written consent of the party sought to be bound; and specifically but without limitation moneys that may become due and moneys that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment no assignment will release or discharge the assignor from any duty or responsibility under Subcontract Documents.

15.2. DONOHUE and SUBCONTRACTOR each binds itself, its partners, successors, assigns, and legal representatives to the other party hereto, its partners, successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Subcontract Documents.

DONOHUE and SUBCONTRACTOR have signed this Agreement in original counterparts. All portions of the Subcontract Documents have been signed or identified by DONOHUE and SUBCONTRACTOR.

This Agreement will be effective on October 31, 1990

(CORPORATE SEAL)

John Mathes & Associates, Inc
(SUBCONTRACTOR)

Charles W. Roberts
(Signature)

Charles W. Roberts
General Manager of Exploration
(Typed Name and Title)

Address for giving notices:

210 Sand Bank Road
Columbia, Illinois 62236-0330

(If SUBCONTRACTOR is a corporation attach evidence of authority to sign.)

DONOHUE & ASSOCIATES, INC.

Roman M. Gau
(Signature)

Roman M. Gau P.E. Project Manager
(Typed Name and Title)

Address for giving notices:

111 North Canal Street,
Suite 305
Chicago, Illinois 60606

ATTACHMENT B

ADDENDUM NO. 1
HIMCO DUMP SUPERFUND SITE
DONOHUE PROJECT 20026
SUBCONTRACT NO. 17-5L4J-2

DATE: October 1, 1990

The following revisions are made to the above referenced Request for Proposal.

1. Add to section 01010 Part 1.05, WORK BY SUBCONTRACTOR.

k. Advance four (4) soil borings to approximately 175-200-ft using mud rotary techniques. 6-in diameter steel casing shall be driven as required to stabilize the boring. Collect split-spoon samples at 5-ft intervals. Collect additional split spoon samples or shelby tubes as directed by DONOHUE.

j. Abandon four (4) borings at approximately 175-200-ft depth. If possible, the driven casing shall be back-hammered out of the boring at the completion of the sampling. Backfill the boring with cement/bentonite grout prior to back-hammering.

*****END OF ADDENDUM*****

ARCS/SUBCONTR/HIMCODUM/AB2



ATTACHMENT B

ADDENDUM NO. 2
HIMCO DUMP SUPERFUND SITE
DONOHUE PROJECT 20026
SUBCONTRACT NO. 17-5L4J-2

DATE: October 9, 1990

The following revisions are made to the above referenced Request for Proposal.

1. Add to section 02025 Part 3.03, TEST PIT EXCAVATION.

C. Excavate in 3-ft zones to a maximum depth of 15-ft or until sloughing of the sides into the excavation prevents further excavation without shoring the excavation sidewalls.

2. Change Section 02910, Part 2.01(A)(1) to read as follows:

Construct well of nominal 2-in ID (1.9-in minimum dia), schedule 5 flush-threaded Type 304 stainless steel pipe.

3. Change section 02910, Part 2.01(B)(1) to read as follows:

Continuous wire wrap No. 10 (0.010-in slot) schedule 5 type 304 stainless steel screen.

4. Change the estimated quantity for Bid Form Item 4.A from 6 ea to 120-ft

5. Change the estimated quantity for Bid Form Item 4.B from 2 ea to 200-ft.

6. Change the estimated quantity for Bid Form Item 4.C from 2 ea to 350-ft.

7. Change Bid Form Item 8.A to read Steam Cleaning Per well location, per location.

8. Add Section 2910A, SOIL BORINGS AND MONITORING WELLS.

9. Replace Bid Form pages B-7, B-8, and B-9 with attached pages B-7a, B-8a and B-9a.

*****END OF ADDENDUM*****



ATTACHMENT B

ADDENDUM NO. 3
HIMCO DUMP SUPERFUND SITE
DONOHUE PROJECT 20026
SUBCONTRACT NO. 17-5L4J-2

DATE: October 19, 1990

The following revisions are made to the above referenced Request for Proposal.

1. Delete the following Federal Acquisition Regulation (FAR) clauses on page FAR-2.

52.222-6	Davis-Bacon Act
52.222-7	Withholding of Funds
52.222-8	Payrolls and Basic Records
52.222-9	Apprentices and Trainees
52.222.11	Subcontracts (Labor Standards)
52.222.13	Compliance with Davis-Bacon and Related Act Regulations
52.222-14	Disputes Concerning Labor Standards
52.222-15	Certification of Eligibility
52.222.27	Affirmative Action Compliance Requirements for Construction

2. Delete the following EPAAR clauses on page EPAAR-1.

1552.210-74	Working Files
1552.235-70	Screening of Business Information for Claims of Confidentiality
1552.237-75	Paperwork Reduction Act
1552.245-71	Government Furnished Data
1552.245.72	Fabrication or Acquisition of Nonexpendable Property

3. Replace clause H.24, Page EPAAR-6, with revised clause H.24 (attached).

H. 24 INSURANCE

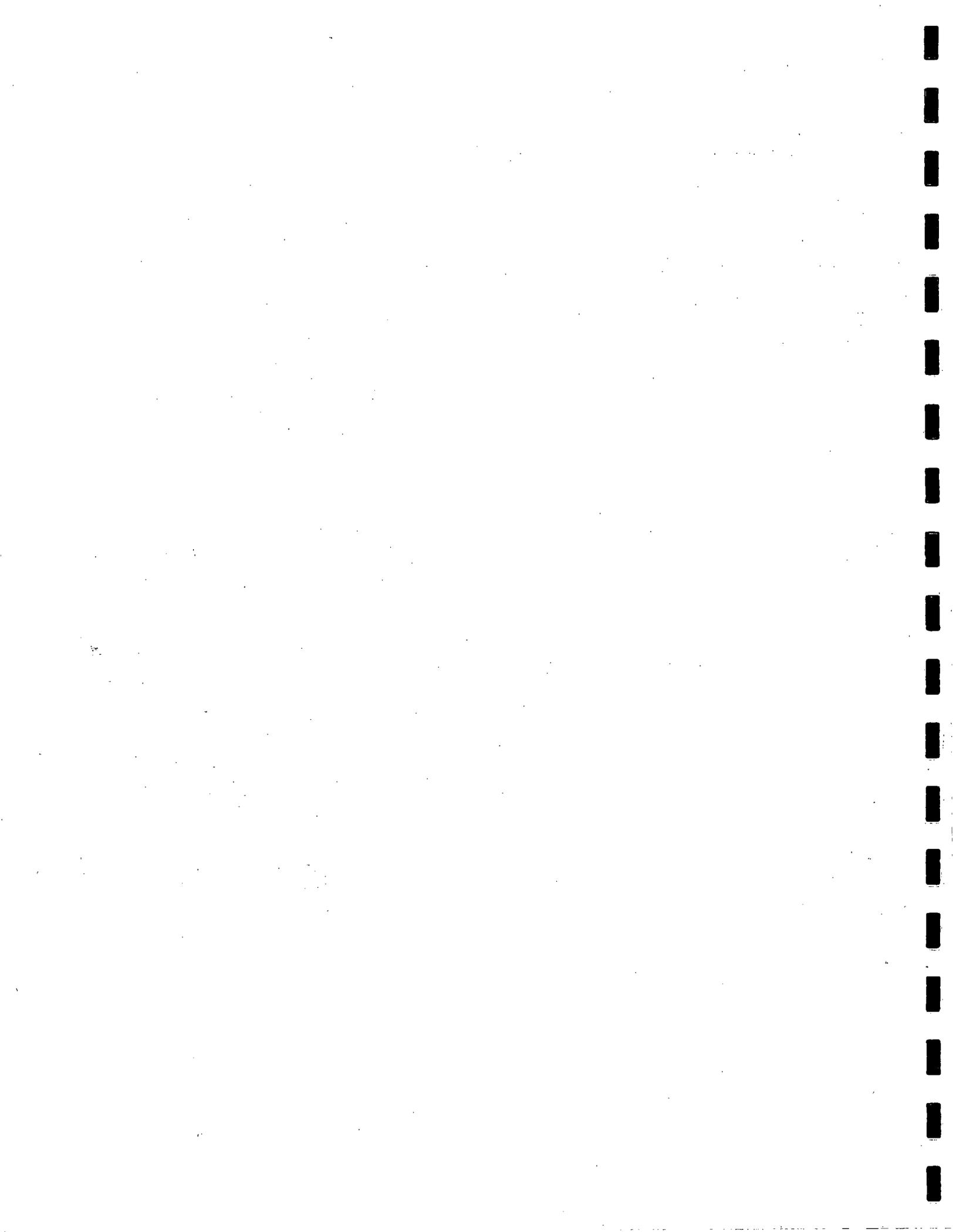
a. At a minimum, the Subcontractor shall procure and maintain the following types of insurance:

1. Workmen's compensation and occupational disease insurance in amounts to satisfy State law;
2. Employer's liability insurance in the minimum amount of \$100,000 per occurrence;
3. Comprehensive general liability insurance for bodily insurance, death or loss of or damage to property of third persons in the minimum amount of \$1,000,000 per occurrence;
4. When vessels are used in the performance of the contract, vessel collision liability and protection and indemnity liability insurance in such amounts as Donohue may require or approve: provided, that the subcontractor may, with the approval of Donohue, maintain a self-insurance program. All insurance required pursuant to the provisions of this paragraph shall be in such form and for such periods of the time as Donohue may, from time to time, require or approve and with insurers approved by Donohue.

3. Add the following Federal Acquisition Regulation (FAR) clauses.

- 52.213-33 Order of Precedence
- 52.223-1 Clean Air Water Certification
- 52.223-3 Hazardous Material ID/Safety Data
- 52.232-16 Progress Payments
- 52.236-6 Supertendence by the Contractor
- 52.236-17 Permits and Responsibilities
- 52.236-8 Other Contracts
- 52.236-9 Protection of Existing Improvements
- 52.236-13 Accident Prevention
- 52.249-1 Termination for Convenience - Fixed Price
- 52.249-8 Default (Fixed-Price Supply and Service)
*****END OF ADDENDUM*****

ARCS/SUB/HIMCODUM/AC2





John Mathes & Associates, Inc.

A Burlington Environmental Inc. Company

210 West Sand Bank Road
P.O. Box 330
Columbia, Illinois 62236-0330
618/281-7173
314/241-1785
FAX 618/281-5120

October 22, 1990

Mr. Pat Butler
Donohue & Associates, Inc.
111 North Canal Street
Suite 305
Chicago, Illinois 60606

Subject: Subcontract 17-5L4J-2
Himco Dump Superfund Site

Dear Mr. Butler:

We are in receipt of Addendum No. 3 for the above referenced subcontract. John Mathes & Associates, Inc. (Mathes) hereby agrees to accept the changes incorporated in Addendum No. 3 in its entirety.

Mathes is looking forward to working with Donohue on this project.

Sincerely,

JOHN MATHES & ASSOCIATES, INC.

Charley W. Roberts
General Manager
Exploration Services

CWR/dmh

100





John Mathes & Associates, Inc.

A Burlington Environmental Inc. Company

1 of 6

210 West Sand Bank Road
P.O. Box 330
Columbia, Illinois 62236-0330
618/281-7173
314/241-1785
FAX 618/281-5120

October 12, 1990

Donohue & Associates, Inc.
Engineers, Architects and Scientists
111 North Canal Street, Suite 305
Chicago, Illinois 60606

Attention: Mr. Roman M. Gau, P.E., ARCS Project Manager

Reference: Bid Package
Himco Pump Superfund Site
Elkhart, Indiana

Dear Mr. Gau:

John Mathes & Associates, Inc. (Mathes) is pleased to submit the enclosed bid package for drilling and well installation services at the above referenced site. The bid package includes the following documentation:

- o Drilling Methodology and Procedures;
- o Mathes Statement of Qualifications;
- o MBE/WBE/SBE Certification;
- o Completed Price Proposal Form - Exhibit A;
- o Estimated Project Schedule; and.
- o Copy of Indiana Well Drilling License.

Mathes has performed a preliminary review of the Health & Safety Plan and intends to abide by the guidelines and procedures outlined.

The enclosed costs for both proposals were based on the following assumptions:

- o All boring locations and utilities will be located by others.
- o All well materials will be furnished by Mathes.
- o All work is to be performed in Level "D" protective clothing with Level "C" protection on standby. If Level "C" or "B" protection is necessary, the applicable unit rates would be increased by 25 percent.
- o We assume the work shift to be 10 days on and 4 days off, unless other arrangements are made prior to mobilization.
- o The ambient air in the work space will be monitored by client and will advise Mathes personnel of any elevated readings requiring any change in personal protection.
- o If awarded this project, a copy of the Health & Safety Plan will be required for review, one week prior to mobilization.

Mathes hopes the enclosed information and costs are suitable to your needs. Should you have any questions or need any additional information, please call me at (618) 281-7173.

Sincerely,

JOHN MATHES & ASSOCIATES, INC.



Chuck Harriss
Assistant Manager
Exploration Services

CSH/dmh

Enclosures

**JOHN MATHES & ASSOCIATES, INC.
EXPLORATION SERVICES**

Donohue & Associates, Inc.
Himco Dump Superfund Site
Elkhart, Indiana

SUMMARY OF DRILLING METHODOLOGY

Mathes intends to utilize two drill rigs for the first ten day shift and one on the second shift. One CME 75 truck mounted drill rig, one Ingersal Rand TH-60 air rotary drill rig, with a drill through casing driver attachment. The rigs will be equipped with 4 X 4 one ton service trucks and decon equipment.

OBSERVATION WELLS & SAMPLING OF LANDFILL CAP

Six observation wells will be drilled with 4-1/4-inch hollow stem augers. The lead auger will be fitted with a stainless steel knockout plate at the base of the cutting head. The stainless steel plates will be pushed out and below the lead auger with the well string. After removal of the knock out plate the monitoring well will be set and completed by standard well construction through hollow stemmed auger procedures as specified in the project manual. The cap of the landfill will be sampled by pushing shelby tubes into the clay cap as specified in the project manual. The CME-75 drill rig will be utilized in these procedures.

TEST PITS

Upon completion of the observation wells and landfill cap sampling, the CME-75 drill rig crew will begin digging the 20 test pits as specified in the project manual. After completion of the test pits the CME-75 drill rig and crew will demob from the site.

DEEP SOIL BORINGS

The four deep soil borings will be drilled with a TH-60 mud rotary drilling rig. A 7-7/8-inch rotary bit would be utilized to drill the borehole to the target depth. The drill rod size that would be used is a 4-1/2-inch API drill rod with a 2-7/8-inch IF coupling. The size of this drill pipe would enable us to take our split spoon samples through the drill rods and through the bottom of the bit. The split spoon samples that we take will not be a standard penetration test as per ASTM specifications, but the split spoon sample will provide you with a representative sample of the strata on 5-foot intervals as requested. The price that we submitted in this proposal is for using this method.

If ASTM standards penetration test are needed, then our proposal would have to be recalculated for this procedure. By using the downhole hammer method, through the drill rods, we can save approximately two hours for a sample taken at 200 feet deep. On this project, that could figure into several days per borehole saved in time and also several thousands of dollars saved in actual money spent to obtain these samples.

INTERMEDIATE & DEEP PIEZOMETERS

Mathes will utilize the TH-60 air rotary rig with the drill through casing driver to install these piezometers. We will drill and drive 8-inch welded steel casing to the target depth. Once the target depth is reached we will begin installing the well, the 8-inch steel casing will be back driven to expose the well screen, while filter sand and bentonite seal is being placed. Once these are installed the casing will be grouted in place.

DECON PAD & DRUM STAGEING AREA

Mathes anticipates constructing the decon pad and drum staging area as specified in the project.

CSH/dmh



DEPARTMENT OF NATURAL RESOURCES
 WATER WELL DRILLING LICENSE
 Division of Water

Christopher S. Hebel

Is entitled to operate well drilling equipment or engage in
 the drilling of wells Pursuant to I.C. 25-39.

Certificate Number	Expiration Date
871	12/31/90
Receipt Number	Signature
766171	

To be carried by Driller

DEPARTMENT OF NATURAL RESOURCES
 WATER WELL DRILLING LICENSE
 Division of Water

David W. Ellis

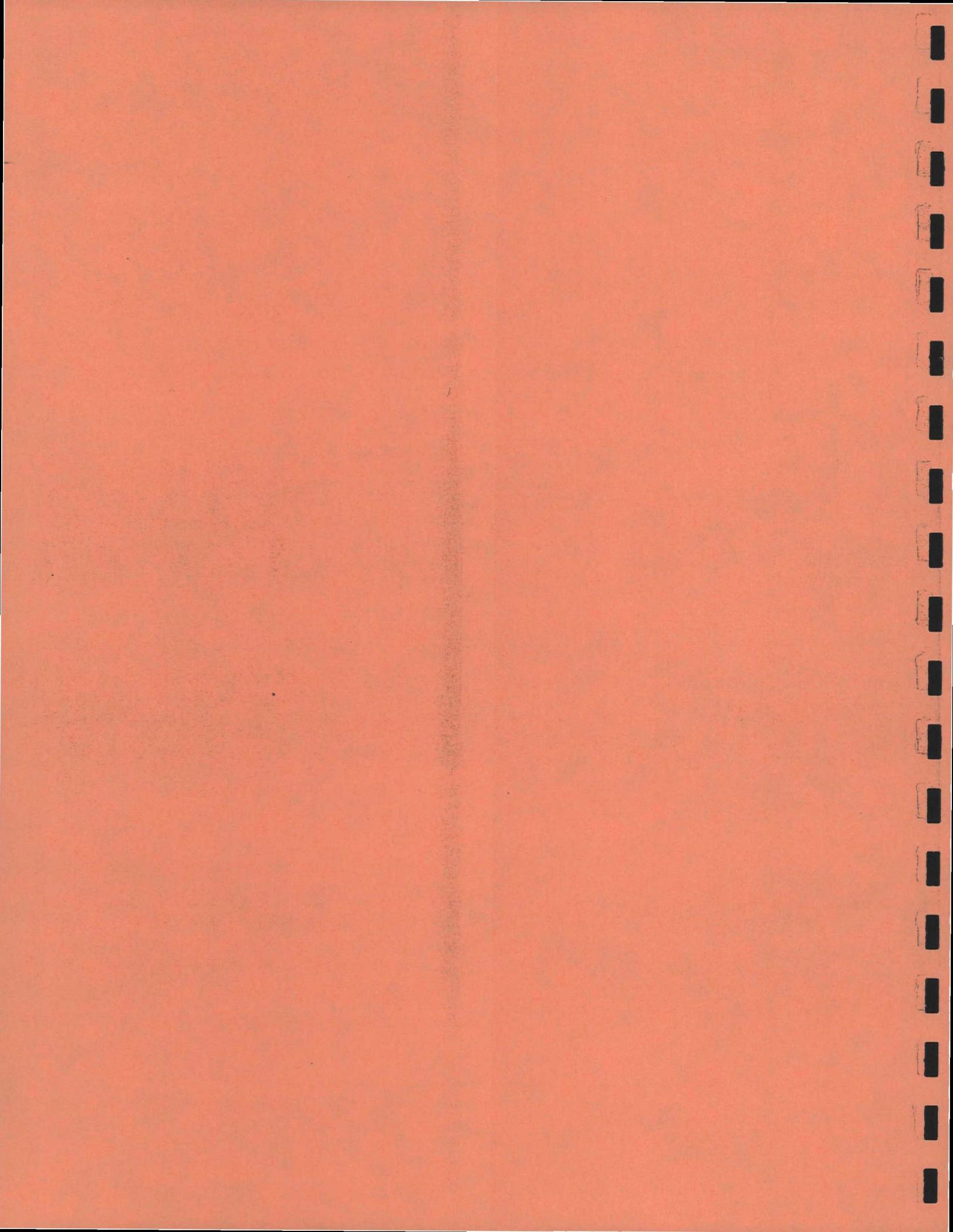
Is entitled to operate well drilling equipment or engage in
 the drilling of wells Pursuant to I.C. 25-39.

Certificate Number	Expiration Date
882	12/31/90
Receipt Number	Signature
766171	

To be carried by Driller



TERMS AND CONDITIONS REQUIRED
FOR
FEDERAL SUBCONTRACTS



FEDERAL ACQUISITION REGULATION (FAR) CLAUSES
(Environmental Protection Agency Contracts)
Fixed Price Subcontracts

1. DEFINITIONS

The following definitions apply unless otherwise specifically stated:

- "Prime Contractor" - the legal entity issuing this Subcontract.
"Subcontract Administrator" - Prime Contractor's representative.
"Subcontractor" - the legal entity which contracts with the Prime Contractor.
"This Subcontract" - this contractual instrument, including changes.
"Prime Contract" - the Government contract under which this Subcontract is issued.
"FAR" - the Federal Acquisition Regulation.
"EPAAR" - Environmental Protection Agency Acquisition Regulation.

2. FAR CLAUSES APPLICABLE TO THIS ORDER

The clauses in FAR Subpart 52.2 referenced in paragraph (3), below, in effect on the date of this Subcontract, are incorporated herein and made a part of this Subcontract. To the extent that an earlier version of any such clause is included in the Prime Contract or Subcontract under which this Subcontract is issued, the date of the clause as it appears in such Prime Contract or Subcontract shall be controlling and said version shall be incorporated herein. In all such clauses, unless the context of the clause requires otherwise, the term "Contractor" shall mean Subcontractor, the term "Contract" shall mean this Subcontract, and the terms "Government," "Contracting Officer" and equivalent phrases shall mean Prime Contractor and Prime Contractor's Purchasing Representative, respectively. It is intended that the referenced clauses shall apply to Subcontractor in such manner as is necessary to reflect the position of Subcontractor as a Subcontractor to Prime Contractor, to insure Subcontractor's obligations to Prime Contractor and to the United States Government, and to enable Prime Contractor to meet its obligations under its Prime Contract or Subcontract.

(3) This contract incorporates the following clauses by reference. These clauses have the same force and effect as if they were given in full text. The full text will be made available, upon request.

<u>Clause No.</u>	<u>Title</u>
52.202-1	Definitions
52.203-1	Officials not to Benefit
52.203-3	Gratuities
52.203-5	Covenant Against Contingent Fees
52.203-6	Restrictions on Subcontractor Sales to the Government

<u>Clause No.</u>	<u>Title</u>
52.203-7	Anti-Kickback Procedure
52.203-10	Remedies for Illegal or Improper Activity
52.209-6	Protecting the Government's Interest When Subcontracting with Contractors Debarred, Suspended, or Proposed for Debarment
52.212-13	Stop Work Order
52.215-1	Examination of Records by Comptroller General
52.215-2	Audit -- Negotiations
52.219-8	Utilization of Small Business Concerns and Small Disadvantaged Business Concerns
52.219-13	Utilization of Women-Owned Small Businesses
52.220-3	Utilization of Labor Surplus Area Concerns
52.222-1	Notice to the Government of Labor Disputes
52.222-3	Convict Labor
52.222-4	Contract Work Hours and Safety Standards Act
52.222-6	Davis-Bacon Act
52.222-7	Withholding of Funds
52.222-8	Payrolls and Basic Records
52.222-9	Apprentices and Trainees
52.222-10	Compliance with Copeland Act Requirements
52.222.11	Subcontracts (Labor Standards)
52.222.12	Contract Termination-Debarment
52.222.13	Compliance with Davis-Bacon and Related Act Regulations
52.222-14	Disputes Concerning Labor Standards
52.222-15	Certification of Eligibility
52.222-26	Equal Opportunity
52.222.27	Affirmative Action Compliance Requirements for Construction
52.222-35	Affirmative Action for Special Disabled and Vietnam Era Veterans
52.222-36	Affirmative Action for Handicapped Workers
52.222-37	Employment Reports on Special Disabled Veterans and Veterans of the Vietnam Era
52.227-1	Authorization and Consent
52.227-17	Rights in Data - Special Works
52.229-3	Federal, State, and Local Taxes
52.229-5	Taxes--Contracts Performed in U.S. Posses- sions or Puerto Rico
52.232-1	Payments
52.232-17	Interest
52.232.23	Assignment of Claims
52.232.25	Prompt Payment--Alternate II
52.243-1	Changes - Fixed Price

Clause No.

Title

52.243-1	Changes - Fixed Price--Alternate I
52.243-5	Competition in Subcontracting
52.243-7	Notification of Changes
52.246-25	Limitation of Liability--Services
52.249-14	Excusable Delays



ENVIRONMENTAL PROTECTION AGENCY ACQUISITION
REGULATION (EPAAR) CLAUSES

(Environmental Protection Agency Contracts)
Fixed Price Subcontracts

1. REFERENCES TO ENVIRONMENTAL PROTECTION AGENCY
ACQUISITION REGULATION

All references herein to "Environmental Protection Agency Acquisition Regulation" or "EPAAR" shall mean the Environmental Protection Agency Acquisition Regulation which implements and supplements the Federal Acquisition Regulation.

2. EPAAR CLAUSES APPLICABLE TO THIS SUBCONTRACT

The clauses in EPAAR Subpart 1552.2 referenced below, in effect on the date of this Subcontract, are incorporated herein and made a part of this Subcontract. To the extent that an earlier version of any such clause is included in the Prime Contract or Subcontract under which this Subcontract is issued, the date of the clause as it appears in such Prime Contract or Subcontract shall be controlling and said version shall be incorporated herein. In all such clauses, unless the context of a clause requires otherwise, the term "Contractor" shall mean Subcontractor, the term "Contract" shall mean Subcontract, and the terms "Government", "Contracting Officer", and equivalent phrases shall mean Donohue and Donohue's Subcontract Administrator, respectively. It is intended that the referenced clause shall apply to Donohue in such manner as is necessary to reflect the position of subcontractor to Donohue, to insure Subcontractor's obligations to Donohue and the United States Government, and to enable Donohue to meet its obligations under its Prime Contract or Subcontract.

<u>EPAAR Clause No.</u>	<u>Title</u>
1552.209-71	Organizational Conflicts of Interest
1552.210-74	Working Files
1552.235-70	Screening Business Information for Claims of Confidentiality
1552.235-71	Treatment of Confidential Business Information
1552.237-74	Publicity
1552.237-75	Paperwork Reduction Act
1552.245-70	Decontamination of Government Property
1552.245-71	Government Furnished Data
1552.245-72	Fabrication or Acquisition of Nonexpendable Property

H. 12 LIMITATION ON FUTURE CONTRACTING

Due to the scope and nature of this subcontract, the subcontractor shall observe the following restrictions on future hazardous waste site contracting for the duration of the contract or as otherwise specified:

1. Deleted.
2. Deleted.
3. Deleted.
4. The Subcontractor will be ineligible to compete for remedial action projects for which the Subcontractor has developed the solicitation package.
5. The Subcontractor, for a period of three (3) years after the expiration of this contract, agrees not to compete for or to represent a private party on any work pertaining to a specific site at which the Subcontractor previously performed for the Prime Contractor under this contract without the prior written approval of the Prime Contractor's cognizant EPA Contracting Officer.

The Subcontractor shall insert in any remedial planning and implementation subcontract or consultant agreement hereunder the provisions which shall conform substantially to the language of this article, including this paragraph. However, Paragraphs (4) and (5) shall be included in all subcontract and consultant agreements.

H. 13 HEALTH AND SAFETY

The nature of the work to be performed under this subcontract is inherently hazardous.

In performance of work under this subcontract the Subcontractor shall, as a minimum, satisfy all Federal, state, and local statutes, regulations, ordinances, etc., regarding health and safety. Beyond this minimum requirement, the Subcontractor shall comply with the Prime Contractor's health and safety plans peculiar to a particular site proposed for investigation.

H. 14 TRAINING

The Subcontractor shall certify to DONOHUE in writing that each of its employees, subcontractors, or consultants has completed an EPA approved training program, in relation to this project, prior to assignment of any such employee, subcontractor, or consultant to field duty.

H. 15 TECHNICAL DATA

1. The Subcontractor hereby agrees to deliver to the Government via Donohue within ninety (90) days after the completion of the period of performance of each work assignment or as otherwise requested by the Government the following documents:

- a. All originals and copies, and all abstracts and excerpts therefrom, of all information supplied to the contractor by the Government and specifically designated "Confidential Business Information," pursuant to the clause entitled "Treatment of Confidential Information."
 - b. All originals and copies, and all abstracts and excerpts therefrom, of all information collected by the contractor directly from a business or from a source that represents a business or businesses, such as a trade association, pursuant to the contract clause entitled "Screening Business Information for Claims of Confidentiality."
 - c. All originals (if originals are unavailable, copies will be acceptable) of all data defined below, which is pertinent to the support of the Remedial Response Program and has been furnished to the contractor by the Government or has been generated by the contractor in performance of this contract. In the event that there is any disagreement as to whether certain data is considered pertinent, the EPA Project Officer shall make the final determination. This determination shall not be subject to the terms of the clause entitled "Disputes" set forth in the General Provisions of this contract.

"Data," as used in this clause, means recorded information, regardless of form or the media on which it may be recorded. The term includes technical data and computer software. The term does not include information incidental to contract administration, such as financial, administrative, cost or pricing, or management information.
 - d. Copies of all other types of additional data, including but not limited to: reference materials, source lists, field notes, log books, chemical data, maps, and photographs, pursuant to the contract clause entitled "Additional Data Requirements."
2. With regard to all copies of data specifically requested by the Government during contract performance or for a period of ten years after expiration of the contract and supplied in response thereto by the contractor under the contract clause entitled "Additional Data Requirements," the contractor shall, pursuant to paragraph (c) of said clause, be entitled to compensation (either through this contract or a separate contractual agreement) to cover the cost of collecting, preparing, editing, duplicating, assembling, and shipping the data requested.
 3. The Subcontractor shall not be required to turn over or provide to Donohue or the Government any of the following:
 - a. Financial, administrative, cost and pricing and management data, or other information incidental to contract administration, pursuant to the clause entitled "Rights in Data - Special Works." Such financial, cost, pricing, and management data does not refer to site specific cost records which are necessary to substantiate cost recovery actions.

- b. Data that is not essential and closely related to the contract work. In the event there is any disagreement as to whether certain data is essential and related to the contract work, Donohue's EPA's Project Officer shall make the final determination. This determination shall not be subject to the terms of the contract clause entitled "Disputes."
 - c. Subcontractual agreements for supplies or services. (This exclusion does not apply, however, to technical data resulting from such services.)
 - d. Subcontractor and personnel performance ratings and evaluations.
 - e. Technical or other data previously developed by parties other than the contractor which was acquired independently of this contract or acquired by the contractor prior to this contract under conditions restricting the contractor's right to such data.
4. Upon receipt of all data provided to the Government via Donohue by the subcontractor under paragraph (1), above, the Donohue EPA Contracting Officer shall acknowledge in writing to Donohue the receipt of all confidential or other data. Donohue shall forward said acknowledgment to the subcontractor.

H. 16 FUTURE EXPERT CONSULTING SERVICES

It is recognized that, subsequent to the performance period of this subcontract, the need may arise to provide expert testimony during hearings and/or court proceedings involving site specific activities or other matters, with regard to which personnel provided by the Subcontractor under this contract (including subcontractor personnel) would have gained expertise as a result of tasks performed under this contract. Therefore, the contractor agrees to make available expert consulting services in support of such future proceedings, and to enter into intent agreements as necessary with subcontractors to ensure the availability of subcontractor personnel, provided under this contract, to provide expert consulting services. Agreement to provide such services in the future serves as a notice to intent only. Such services are not purchased hereby and will be obtained through a separate contractual agreement.

H. 17 NOTIFICATION OF CONFLICT OF INTEREST REGARDING PERSONNEL

In addition to the requirements of the contract article entitled "Organizational Conflicts of Interest," the following provisions with regard to individual personnel performing under this contract shall apply for the duration of the contract.

The Subcontractor agrees to notify the EPA Contracting Officer via Donohue of any actual, apparent, or potential conflict of interest with regard to any individual working on a work assignment or having access to information regarding this contract. Notification of any conflict of interest shall include both organizational conflicts of interest (as defined in the above-referenced contract clause) and personal conflicts of interest (which are defined as the

same types of relationships as an organizational conflict of interest, but applicable to an individual.)

In the event that a personal conflict of interest appears to exist, the individual who is affected shall be disqualified from taking part in any way in the performance of the assigned work which created the conflict of interest situation.

H. 18 PROJECT EMPLOYEE CONFIDENTIALLY AGREEMENT

The Subcontractor agrees to obtain confidentiality agreements from all personnel working on requirements under this contract.

Such agreements shall contain provisions which stipulate that each individual agrees not to disclose to any entity external to EPA, Donohue, or the subcontractor either in whole or in part any data or technical data provided by the Government or generated by the strategy without first obtaining the written permission of Donohue's EPA Contracting Officer via Donohue. Such agreements shall be effective for a period of ten (10) years commencing with the effective date of the contract.

H. 19 (Not Applicable)

H. 20 EXPERT TESTIMONY

From time to time, the Government may have the need for expert testimony during enforcement proceedings for a given site where the subcontractor provided services. Such effort shall be considered within the scope of this subcontract. The individual(s) selected to testify shall be fully knowledgeable of the details of the site under litigation, shall be credible, and be an expert in their field. The testimony shall normally relate to what actions the subcontractor took at a site. In the event such services are required after performance of this subcontract, a separate negotiated procurement action may be instituted with the subcontractor.

H. 21 (Not Applicable)

H. 22 (Not Applicable)

H. 23 (Not Applicable)

H. 24 INSURANCE--LIABILITY TO THIRD PERSONS--COMMERCIAL ORGANIZATIONS (EPAAR 1552.228-70) (APR 1984) (with deviation)

- a. This clause will be modified by the mutual agreement of the parties hereto within 180 days of the EPA's promulgation of final guidelines for carrying out the provisions of Subsection 119 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended (CERCLA).
- b. The Subcontractor shall procure and maintain such insurance as is required by law or regulation, including that required by FAR Part 28, in effect as of the date of execution of this

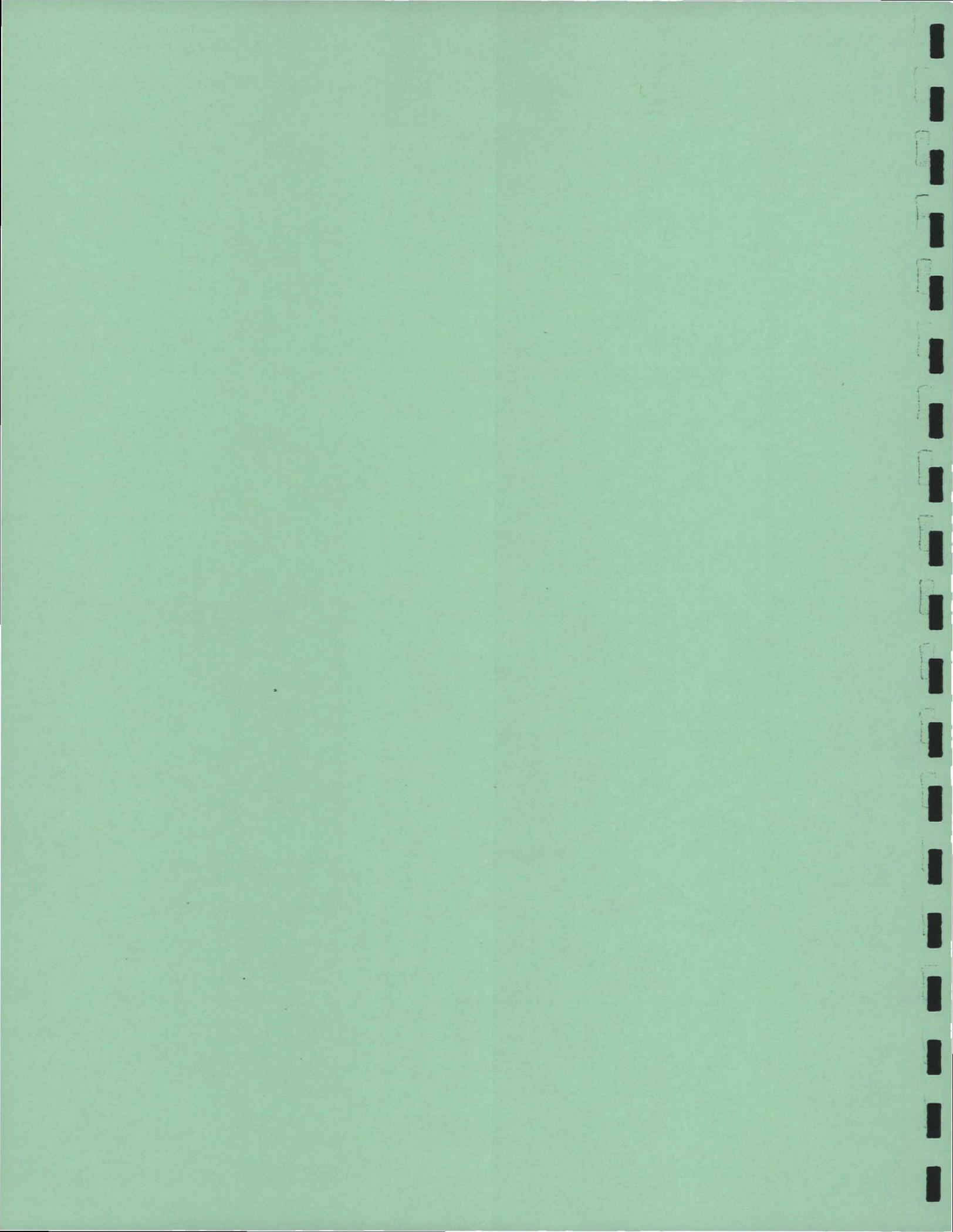
subcontract, and any such insurance as Donohue may, from time to time, require with respect to performance of this contract.

c. At a minimum, the Subcontractor shall procure and maintain the following types of insurance:

1. Workmen's compensation and occupational disease insurance in amounts to satisfy State law;
2. Employer's liability insurance in the minimum amount of \$100,000 per occurrence;
3. Comprehensive general liability insurance for bodily insurance, death or loss of or damage to property of third persons in the minimum amount of \$1,000,000 per occurrence;
4. When vessels are used in the performance of the contract, vessel collision liability and protection and indemnity liability insurance in such amounts as Donohue may require or approve: provided that the subcontractor may, with the approval of Donohue, maintain a self-insurance program. All insurance required pursuant to the provisions of this paragraph shall be in such form and for such periods of the time as Donohue may, from time to time, require or approve and with insurers approved by Donohue.

S P E C I F I C A T I O N S

DIVISION 1
GENERAL REQUIREMENTS



SECTION 01010
STATEMENT OF WORK

PART 1 GENERAL

1.01 SUMMARY

A. Work Covered by Subcontract Documents:

1. Work for this Subcontract includes drilling of soil borings, soil sampling, excavation of test pits, visual classification of soil types, installation of groundwater monitoring wells, and construction of drum storage area and decontamination pad at Himco Dump Superfund Site, Elkhart, Indiana.

B. Bid Schedule:

1. Include cost of Work specified in Contract Documents for soil boring, monitoring well installation, excavation of test pits, soil sampling, and construction of drum storage area and decontamination pad for DONOHUE in unit prices included in Bid Form.

C. Payment:

1. Consider Work specified in this section as part of appropriate unit prices specified in Bid Form.

1.02 DESCRIPTION OF WORK SITE

- A. In accordance with ARCS V Work Assignment No. 17-5L4J for U.S. Environmental Protection Agency, EPA has initiated development of Design Investigation (DI) to be performed by DONOHUE under Region V ARCS Program Contract No. 68-WB-0093.
- B. Himco Dump site is located at County Road 10 and Nappanee Street Extension in town of Elkhart, located in Elkhart County, Indiana. Figure 2-1 is site location map. Site covers approximately 50 acres in Northwest 1/4 of Section 36, Township 38 North, Range 4 East, in Cleveland Township. Site is bounded on north by tree line and northernmost extent of gravel pit pond; on west by fish pond; on south by County Road 10 and two private residences; and on east by Nappanee Street Extension. Land use in vicinity of site is agricultural, residential, and light industrial.
- C. Himco Dump site was in operation between 1960 and 1976. Refuse was placed at ground surface across site with exception of trench filling in eastern quarter of site. Five trenches 10-15 ft deep, width of truck and 30 ft long, were excavated in this area. Paper refuse was reportedly dumped in these trenches and burned. Two-thirds of waste present in dump is calcium sulfate. Other wastes include

demolition/construction debris, industrial and hospital wastes, and to minor degree, general household refuse. Himco Dump site was placed on NPL in February 1990.

- D. In 1981, United States Geological Survey (USGS) reported potential leachate plume from Himco Dump using bromide tracer concentration in groundwater. Bromide concentrations in groundwater have been monitored from 1979 until present. In 1984, laboratory analysis of wells sampled showed that groundwater was impacted by metals and semi-volatile and volatile organic compounds. Metals detected included aluminum, arsenic, barium, chromium, cobalt, selenium, beryllium, cadmium, copper, zinc, manganese, lead, nickel, and mercury. Volatile and semi-volatile organic compounds detected included: acetone, benzene, phenol, freons, 4-methylphenol, trans 1,2-dichloroethane, 2-butanone, chloroethane, and pyrene. Leachate seeps were also observed around perimeter of landfill.
- E. Site geology consists of sand and gravel glacial outwash deposits, interbedded with silt and clay. These deposits range in thickness from 85 to 500 ft, with an average thickness of 175 ft. Silt and clay layer ranging in thickness from 20 to 80 ft is found adjacent to site at depths of approximately 70 ft. Beneath Himco Dump site, silt and clay layer is absent. Shale units underlie these unconsolidated deposits.
- F. Water table is located at depths ranging from 8 to 17 ft. Outwash aquifer is unconfined below Himco site. Horizontal groundwater flow is generally towards St. Joseph River to south-southeast.

1.03 FORM OF SPECIFICATIONS

- A. Some Work described in these Specifications use systematic approach for identifying systems of service or installation.
 - 1. System components either specified in System Specification or by reference to another section.
- B. Term "provide" or "provided" shall mean "furnish and install in place."

1.04 SCOPE OF WORK FOR SUBCONTRACT

- A. Perform Work under Firm Fixed Unit Price Contract with DONOHUE.
- B. Collect soil samples every 4 ft at four locations to further define site stratigraphy. Soil sampling will be conducted down to 175 to 195 ft at these four locations.
- C. Install maximum of 10 monitoring wells to include six water table observation wells at depths of approximately 10 to 20 ft, two intermediate piezometers at depths approximately 95 to 100 ft, and two

deep piezometers at depths of approximately 170 to 175 ft. Installations include four unnested water table observation wells and two well nests. Well nests will include one observation well, one intermediate piezometer, and one deep piezometer.

- D. Collect seven shelly tube samples by pushing tubes into landfill cover at five locations. At two of five locations, an additional shelly tube will be pushed.
- E. Perform excavation of test pits at maximum of 20 locations. Number of test pits necessary will be based on findings of preliminary geophysical testing performed by DONOHUE. Fifteen ft is maximum depth of test pit excavation and 25 ft is anticipated length.

1.05 WORK BY SUBCONTRACTOR

- A. Work includes, but is not limited to, providing labor, materials, equipment, supervision, mobilization/demobilization, decontamination, and cleanup to complete soil borings, monitoring well installations, test pits and collection of shelly tubes in landfill cap.

1. Tasks to be completed include:

- a. Construct and install six 20-ft observation wells. Borings completed for installation of observation wells shall be completed using minimum 4-1/4 in. I.D. hollow stem augers. Sampling methods to be followed involve continuous sampling utilizing 2-ft long, 3-in. O.D. stainless steel split spoon sampler.
- b. Advance two soil borings to an approximate 100-ft depth using air-rotary. 6-in. steel casing shall be driven and secured prior to well installation. Construct two 100-ft piezometer wells.
- c. Advance two soil borings to approximately 175-ft depth, using air rotary. 6-in. steel casing shall be driven and secured prior to well installation. Construct and install two 175-ft piezometer wells.
- d. Collect seven shelly tubes by pushing tubes into landfill cover across site.
- e. Decontaminate stainless steel split-spoon sampler between chemical samples. Clean water rinse steel split-spoon sampler between samples taken for use other than chemical analysis.
- f. Decontaminate drilling rigs and down-hole equipment between well locations.
- g. Excess drill cuttings determined to be contaminated by DONOHUE field screening will be containerized in 55-gallon DOT approved drum. 55-gallon drums will be supplied by SUBCONTRACTOR. SUBCONTRACTOR shall also transport drums to drum storage area located on-site and place drums on

pallets provided by SUBCONTRACTOR.

- h. Construct drum storage area in location determined by DONOHUE as specified in Section 02910.
- i. Construct decontamination pad at location determined by DONOHUE as specified in Section 02910.
- j. Excavate maximum of 20 test pits with backhoe provisional on geophysical determination of buried metallic objects. Test pits will be maximum of 15 ft deep and approximately 25 ft long.

- B. SUBCONTRACTOR shall comply with all applicable state and local regulations. SUBCONTRACTOR shall obtain well permits, if required.
- C. SUBCONTRACTOR shall maintain good public relations with property owners and occupants. SUBCONTRACTOR'S field personnel shall be made thoroughly cognizant by SUBCONTRACTOR of importance of this aspect to Work and its sensitivity to entire program, as well as to successful completion of SUBCONTRACTOR'S assignment.
- D. All field activities shall be conducted with minimum practical damage to site environment. Thus, tree and brush removal and similar impacts upon site environment shall be limited to only that which is approved by DONOHUE.
- E. SUBCONTRACTOR shall provide all personal protective equipment required in HASP for Level B, C and Level D protection, including hard hats, steel-toe boots, respirators (cartridges must be approved by DONOHUE'S Health and Safety Officer), gloves, and safety glasses.

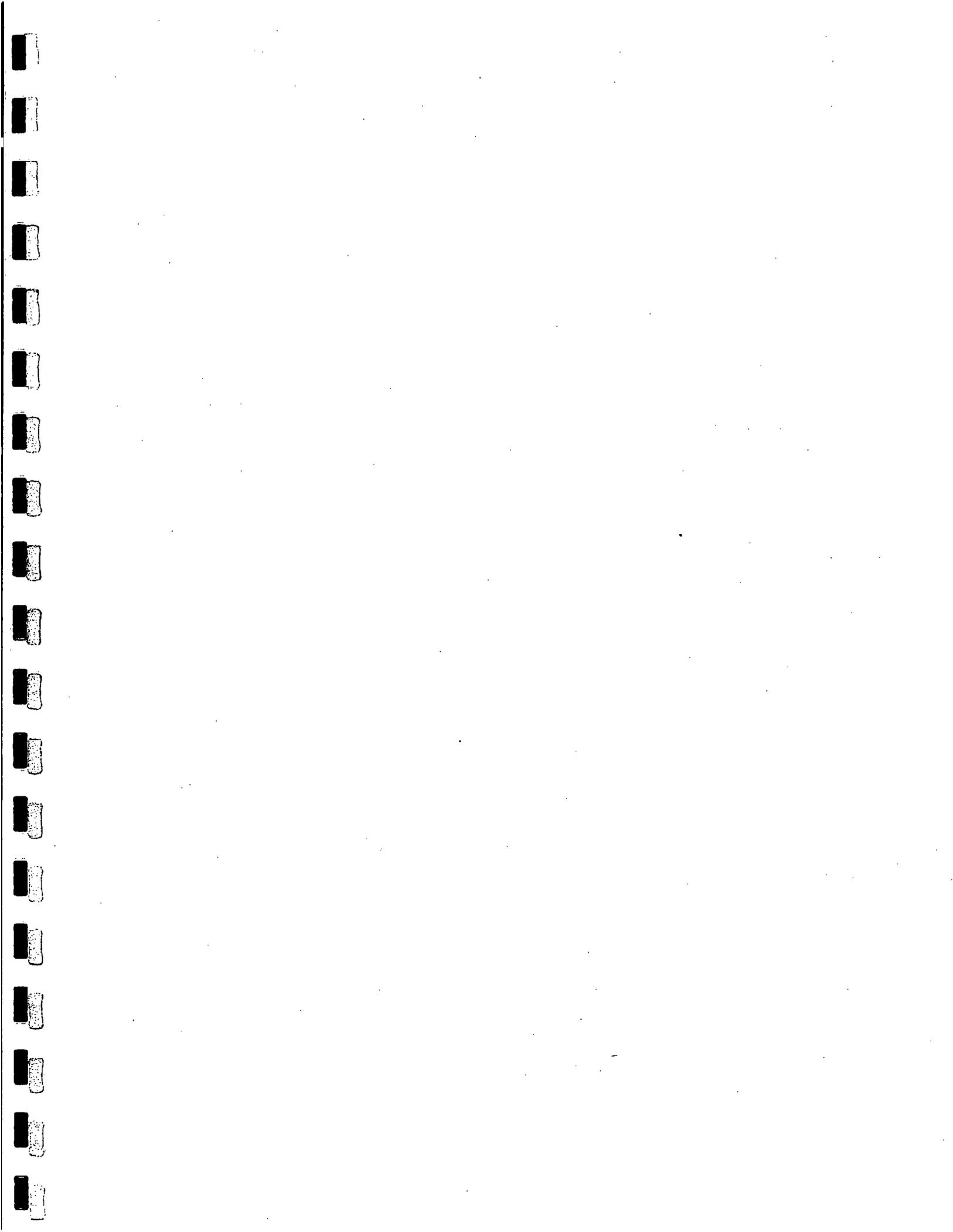
1.06 WORK BY DONOHUE

- A. Work performed by DONOHUE will include:
 - 1. Provide field observation and documentation services during all soil-intrusive activities including soil borings, well construction, and preparation of samples upon removal from sampler.
 - 2. Conduct pre-construction meeting after awarding of bid and prior to commencement of work with SUBCONTRACTOR to discuss project scope, schedule, materials, health and safety protocols, and other information pertinent to project.
 - 3. Stake and mark locations prior to start-up of field activities.
 - 4. Arrange access to all locations through EPA prior to commencement of Work. No SUBCONTRACTOR personnel are to enter any location without first obtaining clearance from DONOHUE'S representative. Equipment access to any location is permitted only with DONOHUE'S clearance.
 - 5. Provide stainless steel split-spoon decontamination fluids to include detergent wash, isopropanol, and distilled water.

1.07 PROJECT SCHEDULE

- A. SUBCONTRACTOR shall be on-site, 10 hrs day, 10 days on 4 days off, to perform soil boring, well installation, geotechnical sampling, field documentation, and related activities. No more than 10 continuous work days will be required without rest days.

* * * END OF SECTION * * *



SECTION 01155
ON-SITE HEALTH AND SAFETY REQUIREMENTS

PART 1 GENERAL

1.01 DESCRIPTION OF WORK

- A. SUBCONTRACTOR shall be responsible for safe work practices, including trenching, sheeting and shoring, scaffolding, materials handling and drilling, for safe operation of equipment, and for safety of their employees and other persons or organizations during progress of Work on-site.
- B. Work at Project site may place SUBCONTRACTOR'S personnel in potentially hazardous situations due to SUBCONTRACTOR'S personnel's exposure to leachate, gases, and other hazardous materials.
- C. Payment:
 - 1. SUBCONTRACTOR shall be paid for cost of Work performed in Level D as incidental and include cost as part of appropriate unit prices specified in Bid Form or at Level B or C in accordance with schedule in Bid Form.

1.02 QUALITY ASSURANCE

- A. Regulatory Requirements:
 - 1. SUBCONTRACTOR shall plan for, and ensure personnel comply with basic provisions of OSHA Safety and Health Standards (29 CFR 1910), and General Construction Standards (29 CFR 1926), as applicable to specific tasks.

1.03 OPERATIONS AND EQUIPMENT SAFETY

- A. SUBCONTRACTOR shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with Work. SUBCONTRACTOR shall take all necessary precautions for safety of all employees performing Work and other persons and organizations who may be affected thereby.
- B. SUBCONTRACTOR shall comply with all applicable Laws and Regulations of any public body having jurisdiction for safety of persons or property or to protect them from damage, injury or loss, and shall erect and maintain all necessary safeguards for such safety and protection.
- C. SUBCONTRACTOR'S duties and responsibilities for safety in connection with Work shall continue until such time as all Work is completed and DONOHUE has issued notice to SUBCONTRACTOR that Work is acceptable.

1.04 HAZARDOUS MATERIALS HEALTH AND SAFETY

- A. DONOHUE has developed Health and Safety Plan (HASP) for environmental safety of personnel on site.
- B. HASP is presented in Appendix G of Project Manual. SUBCONTRACTOR shall become familiar with this plan and comply with its requirements.
- C. Work shall be performed in accordance with Level D personal protection as defined in HASP. Provisions shall be made to upgrade to Level B or C, if necessary.

* * * END OF SECTION * * *

SECTION 01300
SUBMITTALS

PART 1 GENERAL

1.01 DESCRIPTION

- A. This section contains requirements for submittals of daily field progress reports, medical monitoring certificates, payment invoices, and other submittals required by Contract Documents.
- B. Submittal for Review:
 - 1. Submit required materials for DONOHUE'S review in accordance with requirements of Contract Documents.
- C. Submittal for Record:
 - 1. Submit required materials for inclusion into DONOHUE'S records. Submittal materials may or may not be reviewed by DONOHUE.
- D. Payment for Submittals:
 - 1. Consider work specified in this section incidental and include cost as part of appropriate unit prices specified in Bid Form.
 - 2. Quantities recorded on daily paysheets, signed by DONOHUE and SUBCONTRACTOR will be basis for billing and payments made for Work completed. Example paysheet is included in Appendix I.

1.02 FIELD PROGRESS REPORTS

- A. SUBCONTRACTOR shall prepare and submit daily progress reports to DONOHUE for review, at end of each working day.
- B. SUBCONTRACTOR'S representative and DONOHUE'S representative will complete separate duplicate pay sheets (provided by DONOHUE) detailing each day's activities, including drilled footage, hourly charges, etc. Each representative will sign sheets, and quantities on sheets will be basis for billing and payments made for Work completed. No payment shall be made for delays due to equipment failure, lack of necessary personnel, lack of equipment, or weather conditions.

1.03 MANDATORY SUBMITTALS AND DELIVERABLES

- A. SUBCONTRACTOR shall schedule and prepare following submittals and deliverables:

Mandatory Submittals

Due

- 1. Description of Methodology and Procedures to be Utilized in all Activities

With Proposal

- | | |
|---|--|
| 2. Proposed design of decon facility and containment fence | With Proposal |
| 3. Experience Records | With Proposal |
| 4. Company Equipment Inventory | With Proposal |
| 5. Health and Safety Understanding and Intent to Comply | With Proposal |
| 6. Completed Price Proposal Form - Schedule A | With Proposal |
| 7. Proposal Schedule for Completing Work, including Numbers, Types, and Duration of Equipment On-site | With Proposal |
| 8. Certification of Well Drilling License | With Proposal |
| 9. ARCS V Medical Surveillance Requirements | Prior to commencing work and within 5 calendar days from date of Notice to Proceed |
| 10. Certifications of Completion of 40-hour Hazardous Waste and Safety Course | Prior to commencing work and within 5 calendar days from date of Notice of Award |

Deliverables

- | | |
|---|-----------------------------------|
| 1. Daily Progress Reports | At completion of each days work |
| 2. Certificate of Compliance and Deviation Document | At completion of Work |
| 3. Invoices for Payment | Monthly and at completion of Work |
- B. SUBCONTRACTOR shall furnish Certificate of Compliance stating following: "All Work provided under this Contract complies with all requirements of Specification and DONOHUE-approved deviations."
- C. SUBCONTRACTOR shall furnish documents identifying any deviations and their acceptance by DONOHUE Site Manager or designated field representative.

PART 2 PRODUCTS

(NOT APPLICABLE)

PART 3 EXECUTION

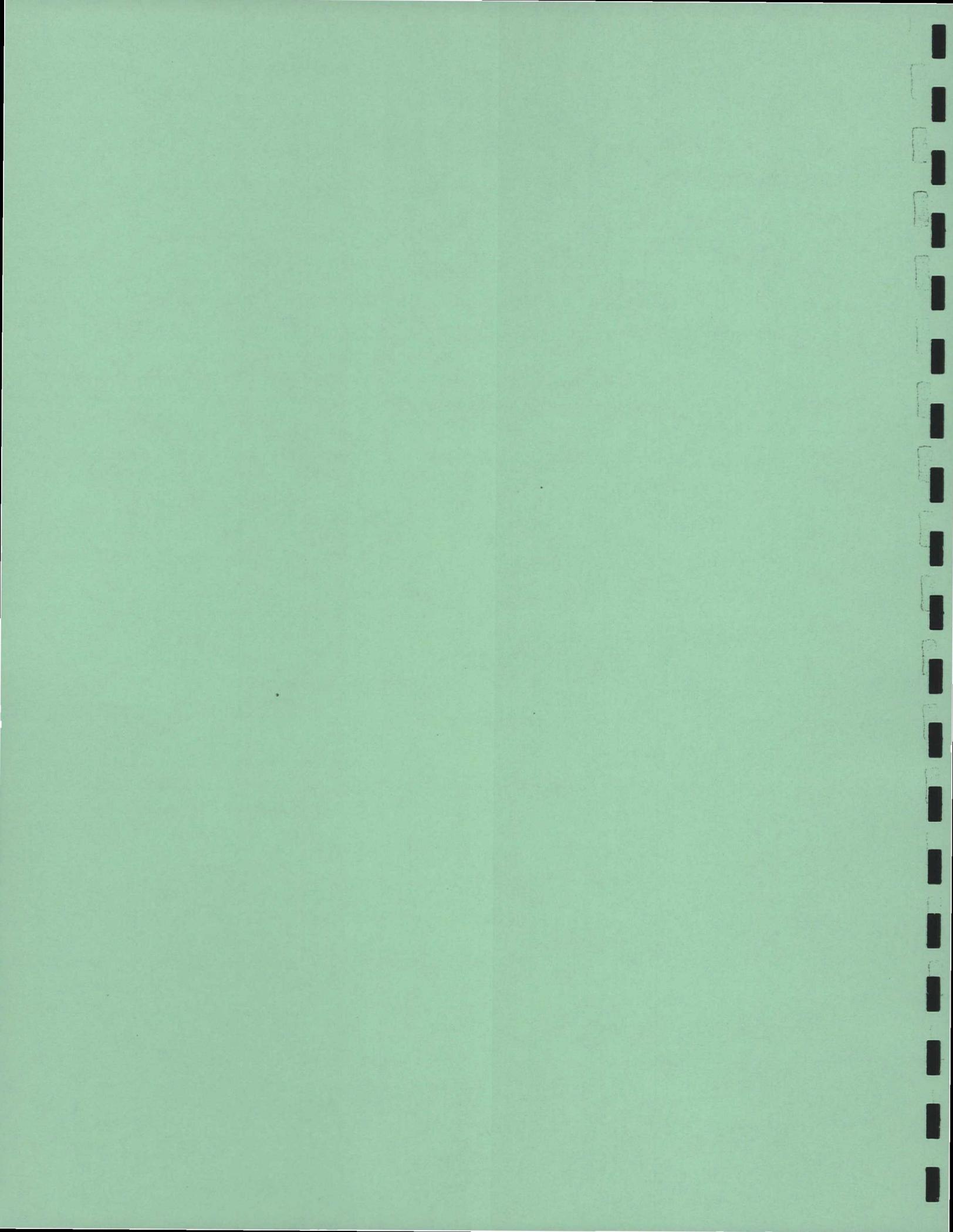
3.01 SUBMITTAL REQUIREMENTS

- A. Provide complete copies of required submittals as follows:
 - 1. Field progress reports: one copy
 - 2. Other Required Submittals: one copy for review and one copy for record.
- B. Deliver required copies of submittals to DONOHUE field representative.
- C. Submit in accordance with Section 02910.
- D. Upon completion of Work SUBCONTRACTOR shall furnish Certificate of Compliance stating following: "All Work provided under this Contract complies with all requirements of Specification and DONOHUE-approved deviations."
- E. SUBCONTRACTOR shall furnish documents identifying any deviations and their acceptance by DONOHUE Site Manager or designated field representative.

* * * END OF SECTION * * *



DIVISION 2
TECHNICAL REQUIREMENTS



SECTION 02025
TEST PIT EXCAVATION

PART 1 GENERAL

1.01 SUMMARY

A. Description of Work:

1. Excavate test pits.

B. Approximate location of test pit excavations will be determined by DONOHUE.

1.02 REFERENCES

A. American Society for Testing and Materials (ASTM):

1. ASTM D2487-85 - Test Method for Classification of Soils for Engineering Purposes.
2. ASTM D2488-84 - Standard Practice for Description and Identification of Soils (Visual-Manual Procedure).

B. Site location Map (Appendix C).

1.03 QUALITY ASSURANCE

A. Conduct work using personnel experienced in backhoe test pit excavations for collection of subsurface soil samples.

B. Comply with requirements of these specifications.

PART 2 MATERIALS

(NOT USED)

PART 3 EXECUTION

3.01 PREPARATION

A. Do not start excavation until site is cleared and grubbed.

B. Do not start excavation until plastic sheeting has been spread to underlie excavated materials and work zone has been sectioned off.

C. At test pit locations, all Work is to be completed in Level B protective equipment.

3.02 DECONTAMINATION OF EQUIPMENT AND DISPOSAL

A. Decontamination of Equipment:

1. Prior to mobilization of backhoe on-site, clean backhoe and associated equipment to remove items such as oil, grease, mud, and tar. Cleaning process consists of steam cleaning.
2. Unless otherwise specified by DONOHUE, steam clean backhoe equipment before being moved from one test pit location to another.
3. Provide mobile equipment necessary for steam cleaning process, including but not limited to steam cleaner capable of producing live steam, associated hoses, fittings and spray wands, and water tank.

3.03 TEST PIT EXCAVATION

- A. Perform test pit excavations to maximum depth of 15 ft or water table, whichever is shallower.
- B. At each location determined by DONOHUE, excavate soils in 2- to 3-ft lifts taking care not to damage drums potentially buried beneath surface.

3.04 BACKFILL AND CLEAN UP

- A. Backfill test pits with excavated materials and compact to prevent settlements.
- B. Level piles of excess excavated material resulting from test pit excavation or other operations.
- C. Clean site of debris resulting from SUBCONTRACTOR'S operations.

* * * END OF SECTION * * *

SECTION 02910
SOIL BORINGS AND MONITORING WELLS

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes:

1. Drilling of soil borings.
2. Soil sampling.
3. Installation of monitoring wells.

B. Payment:

1. Consider Work specified in this section incidental and include cost as part of appropriate unit prices specified in Bid Form.
2. Quantities recorded on daily progress reports will be basis for billing and payments made for Work completed.

1.02 REFERENCES:

A. American Society for Testing and Materials (ASTM):

1. ASTM C33-86 - Standard Specification for Concrete Aggregates.
2. ASTM C85-66 - Standard Test Method for Cement Content of Hardened Portland Cement Concrete.
3. ASTM C94-Rev. 8-89 - Specification for Ready-Mixed Concrete.
4. ASTM C150-86 - Standard Specification for Portland Cement.
5. ASTM C294-86 - Descriptive Nomenclature for Constituents of Natural Mineral Aggregates.
6. ASTM D420-87 - Standard Guide for Investigating and Sampling Soil and Rock.
7. ASTM D653-88 - Standard Terminology Relating to Soil and Rock.
8. ASTM D1452-80 - Practice for Soil Investigation and Sampling by Auger Borings.
9. ASTM D1586-84 - Standard Method of Penetration Test and Split Barrel Sampling of Soils.
10. ASTM D1587-83 - Standard Method for Thin-Walled Tube Sampling of Soils.
11. ASTM D2487-85 - Standard Test Method for Classification of Soils for Engineering Purposes.
12. ASTM D2488-84 - Standard Practice for Description and Identification of Soils (Visual-Manual Procedure).

1.03 DEFINITIONS

- A. Terms are defined in ASTM D653.

1.04 QUALITY ASSURANCE

- A. Provide professional experienced in soil boring, sample logging, and installation of monitoring wells used to collect water quality data. Individual shall be responsible for supervising and documenting field operations pertaining to drill rig or backhoe operation.
- B. Prior to use, inspect well materials for cleanliness, deformations and imperfections, and to ensure conformity with technical specifications. Do not use defective materials.

1.05 SUBMITTALS

- A. Submit design of decontamination pad and drum storage area.
- B. Submit in accordance with Section 01300.

PART 2 PRODUCTS

2.01 WELLS

- A. Riser:
 - 1. Construct well of nominal 2-in. ID (1.9 in. minimum dia), Schedule 40 or 80 flush-threaded Type 304 stainless steel pipe.
- B. Screen:
 - 1. Continuous wire wrap No. 10 (0.010-in. slot) stainless steel screen.
 - a. Water table wells: 10-ft screen length.
 - b. Piezometers: 5-ft screen length.
- C. Joints:
 - 1. Wrap with teflon tape, no rubber O-rings, no glue.

2.02 WATER

- A. Water used for drilling, grout mixtures, or concrete mixtures shall be free of bacterial or chemical contamination.
- B. Record water source location and volumes used on well installation form or soil boring log.
- C. Water source may be subject to water quality analysis by DONOHUE prior to use.

2.03 DRIVEN CASING

- A. Minimum 6-in. I.D., flush threaded steel casing.

2.04 CONCRETE

- A. Cement: ASTM C150, Type I.
- B. Aggregate: ASTM C33-86, ASTM C294-86 concrete aggregates.
- C. Concrete Mix: Measure and combine cement, aggregates, and water to comply with ASTM C85.
- D. Ready-Mixed Concrete: ASTM C94.

2.05 BENTONITE

- A. General:
 - 1. Clay consisting of greater than 85% sodium montmorillonite, without additives.
- B. Pellets: 1/4 in. dia formed pellets.
- C. Powdered: 200 mesh.
- D. Granules: 8 mesh.

2.06 GROUT

- A. General:
 - 1. Provide equipment to weigh representative grout sample to determine mixed density.
 - 2. Provide equipment for mixing grout to specified mix and density.
 - 3. Hydraulic conductivity of grout shall be less than 1×10^{-7} cm/sec after grout hydration.
- B. American Colloid Pure-Gold Grout:
 - 1. Mixed Density: 10.2 lb/gal.
 - 2. Proportion:
 - a. 50 lb pure-gold grout.
 - b. 14 gal water.
 - 3. Mix: Add grout to water and mix thoroughly.
- C. Cement-bentonite Grout.
 - 1. Proportion:
 - a. 94 lb portland cement (ASTM C150).

- b. 5 lb powered bentonite.
- c. Add 8-10 gal water.

2.07 WELL SCREEN BACKFILL

A. Sand Pack:

- 1. Well-sorted, well-rounded, silica based (95% minimum silica) sand or gravel, visibly free of dust clay, mica, and organic matter.
 - a. For No. 10 slot screen use (0.30 mm) sand.
 - b. Uniformity coefficient greater than or equal to 2.5.
- 2. Collapsed natural formation if approved by DONOHUE.

2.08 TREMIE PIPES

A. Pipes used for seal placement shall consist of one of following:

- 1. Metal pipe.
- 2. Rubber-covered hose reinforced with braided fiber or steel and rated for at least 300 psi.
- 3. Thermoplastic pipe rated for at least 100 psi including:
 - a. Polyvinyl chloride (PVC).
 - b. Chlorinated polyvinyl chloride (CPVC).
 - c. Polyethylene (PE).
 - d. Polybutylene (PB).
 - e. Acrylonitrile butadiene styrene (ABS).

2.09 WELLHEAD PROTECTION

A. Protective Casing:

- 1. Minimum 4-in. dia.
- 2. Minimum 5-ft length.
- 3. Locking covers.
- 4. Steel.
- 5. Keyed alike locks.

B. Guard Posts:

- 1. Steel, concrete filled.
- 2. 5-ft length.
- 3. 4-in. dia.
- 4. 3 guard posts per well.

PART 3 EXECUTION

3.01 FIELD PREPARATION

- A. Clear and grub drilling locations.
- B. Construct drilling pads if necessary.
- C. Construct necessary decontamination facility.

3.02 GENERAL

- A. Auger bore in accordance with ASTM D1452.
- B. Unless otherwise specified, drill and sample in accordance with ASTM D1586 and D1587.
- C. Protect open boreholes from acting as safety hazard or conduit for contamination.

3.03 DECONTAMINATION OF EQUIPMENT AND DISPOSAL

A. Decontamination of Equipment:

1. General:

- a. Special attention should be given to cleaning threaded section of casing and drill rods. Do not use petroleum based lubricants to prevent binding.
- b. Provide equipment necessary for cleaning process.
- c. Conduct equipment decontamination at location specified by DONOHUE.
- d. Conduct equipment decontamination pad to collect decontamination solutions.

2. Clean drill rig and associated equipment prior to on-site mobilization to remove possible contaminating substances such as oil, grease, mud, and tar. Cleaning process shall consist of steam cleaning.

3. Clean sampling equipment between samples and at completion of sampling as specified by DONOHUE, to minimize potential of cross-contamination. Samplers used to collect chemical samples shall be washed with detergent and rinsed with tap water, then rinsed with isopropanol and finally two rinses deionized water. (Deionized water, isopropanol, and detergent supplied by DONOHUE.) Samplers used to collect geotechnical samples shall be washed with tap water.

4. Before drilling each well installation location, clean augers, cutting bits, and drilling rods and other equipment which contacts on-site soils or drilling fluids. Cleaning process shall consist of steam cleaning.

B. Containerization of Potentially Contaminated Soil and Wash Water:

1. Drilling spoils, wash water, cleaning solutions and well development fluid which remain after each soil boring or well installation is considered to be potentially contaminated until determined by DONOHUE otherwise.
2. DONOHUE will determine which wastes shall be containerized by using in-field monitoring equipment.
3. SUBCONTRACTOR shall:
 - a. Transport and secure on-site wastes at designated areas determined by DONOHUE.
 - b. Provide drums which meet DOT requirements for transporting hazardous waste to containerize drilling spoils and drilling fluids.
 - c. Provide equipment for containerizing and transporting waste on-site to drum storage area.
 - d. Decontamination pad shall be drained and decontamination fluids transferred to DONOHUE-supplied frac tank on-site daily with use.

3.04 DRILLING

- A. Drilling and sampling test methods shall comply with ASTM D420.
- B. Record measurements to nearest 0.1 ft.
- C. Record static water level in borehole during drilling and sampling, and after completion of drilling and sampling.
- D. At shallow borings completed for installation of observation wells (approximate depth 20-ft) minimum 4-1/4-ID hollow stem auger drilling techniques shall be used. Soils shall be sampled continuously for chemical analysis utilizing minimum 24-in., 3-in. ID stainless steel split spoon sampler.
- E. Intermediate and deep wells (approximate depths 15-ft and 195-ft) shall be drilled using air rotary methods. 6-in. ID steel casing advanced in conjunction with this method shall be used to prevent borehole collapse during well installation. Casing shall be pulled back to at least 2 ft above well screen during well installation. This casing will be dedicated to well installation upon completion of well installation. No sampling is required at intermediate and deep boring locations for well installation.
- F. Four borings completed for collection of stratigraphic information (approximate depth 195 ft) shall be completed using minimum 3-7/8 rotary wash drilling methods. These borings shall be sampled with standard 2- or 3-in. ID split spoon samplers at 5-ft intervals or at discretion of DONOHUE geologist. Casing shall be driven as required to maintain an open hole. If possible, casing driven for geotech borings shall be back-hammered out of boring upon completion of sampling.

3.05 SAMPLING

A. General:

1. Open split spoon collected for chemical analysis to allow for visual inspection, field screening, and logging by DONOHUE. After logging, DONOHUE will place selected samples in sample jars.
2. Open split spoon samplers collected for stratigraphic information to allow for inspection and logging by DONOHUE. After logging, DONOHUE will place selected samples in sample jars.
3. Shelby tube samples collected shall be inspected and logged by DONOHUE. Subcontractor is responsible for properly sealing shelly tube samples in accordance with ASTM D1587-83.
4. At shallow borings completed for installation of observation wells (approximate 20-ft depth) soils shall be continuously sampled utilizing minimum 4-1/4-in. ID hole for chemical analysis. Minimum 24-in. long, 3-in. OD stainless steel split spoon sampler shall be used in these borings.
5. At 4 borings completed for stratigraphic information, samples shall be taken at 5-ft intervals with possible additional samples to be taken at direction of DONOHUE. Minimum 24-in. long, 2- or 3-in. OD steel split spoon sampler shall be used in these borings.
6. No samples will be retained from air rotary borings for well installation.
7. Use 3-in. dia 3-ft long shelly tubes.

3.06 MONITORING WELL INSTALLATION

A. General:

1. Refer to water table observation well and piezometer details attached (Appendix F).
2. Steam clean monitoring well screen, riser, end plug, immediately prior to monitoring well installation.
3. Store monitoring well construction materials in secure area removed from potentially contaminated areas which could adversely effect performance of monitoring well to produce representative groundwater samples.
4. Record usage of well construction materials daily.

B. Well Screen Backfill:

1. Backfill with sand pack material placed by gravity.
2. Extend sand pack 2-ft above screen in water table wells.
3. Calculate volume of annular space to be backfilled and compare to actual volumes used.
4. Measure depth to sand pack by direct method.

C. Bentonite Seal:

1. Use bentonite pellets for seal material in shallow boreholes with standing water.
2. Tamp bentonite pellet seal material after placement.
3. May use granular bentonite placed by tremie pipe or gravity in dry boreholes.
4. Do not use granular bentonite placed by tremie pipe in boreholes with standing water unless approved by DONOHUE.
5. May use granular or powdered bentonite slurry placed by tremie in dry boreholes or where well depth makes other methods impractical.
6. Hydrate non-slurry seals at least 1 hr before placement of overlying grout or concrete cap.
7. Place minimum of 2-ft thick seals in monitoring wells.
8. Measure depth to seal to nearest 0.1 ft.
9. Estimate slurry seal thickness by volume calculation.

D. Grout Backfill:

1. Backfill above bentonite seal to 6 ft below ground surface with grout.
2. Grout placement shall occur through tremie pipe placed 3 ft above seal and withdrawn as annular space fills.
3. Allow grout to settle minimum of 12 hrs before placing concrete cap. If settling occurs add grout until level remains at 6 ft below ground surface.

E. Concrete Cap:

1. Place concrete collar to ground surface. Do not enlarge borehole dia for installation of concrete collar.
2. Slope concrete away from well at surface.
3. Check installation for concrete collar settlement approximately 24 hrs after well has been completed. If settlement has occurred such that level is below existing grade, place additional concrete to create slightly mounded condition.

F. Protective Casing:

1. Place 5-ft minimum length vented, protective pipe over well stick-up with hinged, locking covers. Vent shall consist of one 1/2 in. dia drain hole placed in protective casing just above concrete collar. Provide vented plug for riser pipe.
2. Allow 4-in. space between top of riser pipe and cover to protective pipe.
3. Label well number on inside cover and outside of protective casing. Use non-fading permanent marker. Label in accordance with DONOHUE'S numbering system.
4. Provide keyed alike locks and keys for protective casing.

3.07 DECONTAMINATION PAD

- A. SUBCONTRACTOR shall design and construct above-ground type on-site.
- B. SUBCONTRACTOR shall design to contain wastes generated during decontamination procedures to include decontamination of drill rig, drilling and sampling equipment, and well materials (for example, pad could be built with large dimension lumber, hypalon liner, and front end ramp).
- C. Wastes shall be contained within this facility. Provisions shall be provided to transfer wastes from pad sump to on-site frac tank for containment and eventual disposal by DONOHUE.
- D. Location of decontamination pad will be determined by DONOHUE.

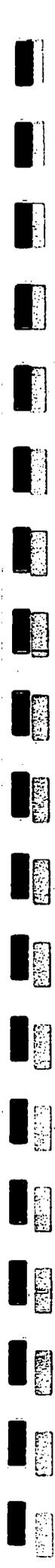
3.08 DRUM STORAGE AREA

- A. SUBCONTRACTOR shall construct secure storage area 25 ft by 25 ft which will allow access to transport 55-gal drums of soil into and out of with heavy equipment (i.e., 6-ft high chain link fence and 3-strand barbed wire with locking gate). SUBCONTRACTOR shall provide wooden pallets for drum storage.
- B. Location of secure storage area will be determined by DONOHUE.

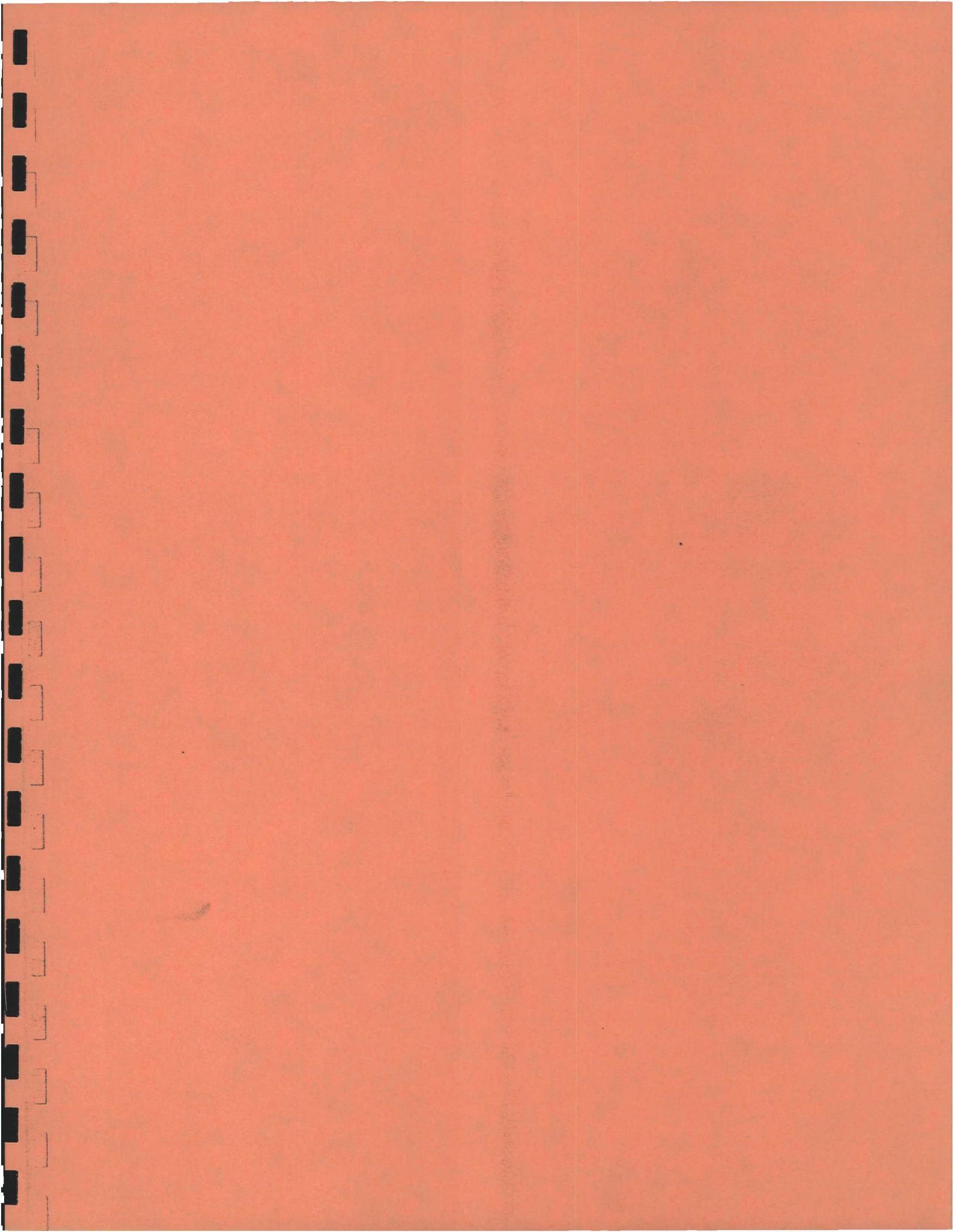
3.09 CLEAN UP

- A. Level piles of earth resulting from drilling or other operations.
- B. Clean site of debris resulting from Work.
- C. Return damaged areas to original site condition.

* * * END OF SECTION * * *

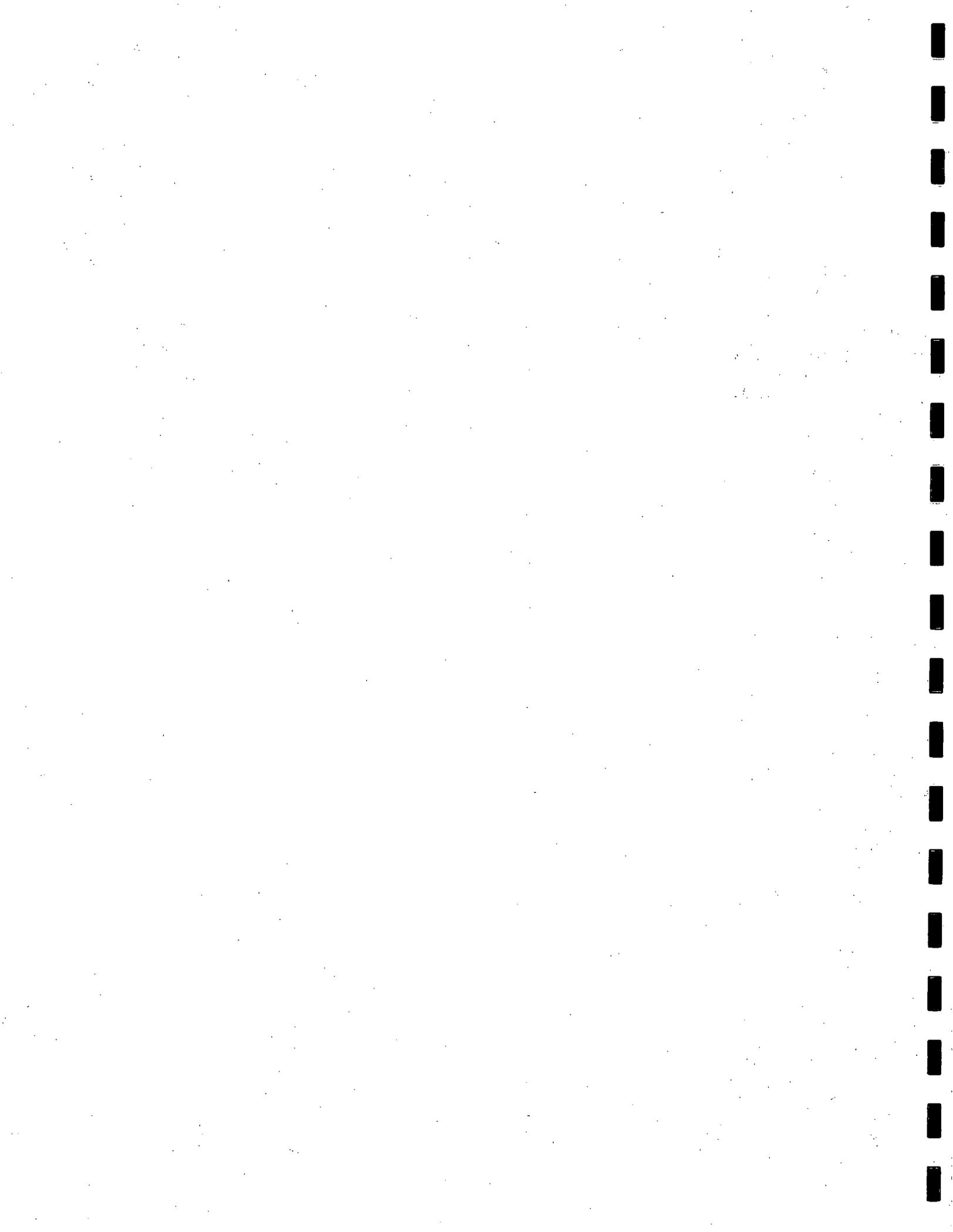


A P P E N D I C E S



A P P E N D I X

- A. "NATIONAL ENFORCEMENT INVESTIGATIONS CENTER
POLICIES AND PROCEDURES (NEIC 330/9-78-001-R)"
- B. CHANGE ORDER FORM
- C. GENERAL LOCATION MAP
- D. GENERAL BORINGS AND WELL LOCATIONS
- E. SUMMARY OF BORINGS AND WELL LOCATIONS
- F. TYPICAL WELL CONSTRUCTION DIAGRAMS
- G. SITE SPECIFIC HEALTH AND SAFETY PLAN (HASP) (PROVIDED UNDER SEPARATE
COVER)
- H. LISTING OF POTENTIALLY RESPONSIBLE PARTIES
- I. DAILY PAY SHEET



APPENDIX A

NATIONAL ENFORCEMENT INVESTIGATIONS CENTER
POLICIES AND PROCEDURES (NEIC 330/9-78-001-R)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF ENFORCEMENT AND COMPLIANCE MONITORING

EPA-330/9-78-001-R

NEIC POLICIES AND PROCEDURES

May 1978
[Revised May 1986]

NATIONAL ENFORCEMENT INVESTIGATIONS CENTER
Denver, Colorado

CHAIN-OF-CUSTODY PROCEDURES

Due to the evidentiary nature of samples collected during enforcement investigations, possession must be traceable from the time the samples are collected until they or their derived data are introduced as evidence in legal proceedings. To maintain and document sample possession, chain-of-custody procedures are followed.

Sample Custody

A sample is under custody if:

1. It is in your possession, or
2. It is in your view, after being in your possession, or
3. It was in your possession and you locked it up, or
4. It is in a designated secure area.

Field Custody Procedures

1. Collect only the number of samples needed to represent the media being sampled. To the extent possible, determine the quantity and types of samples and sample locations prior to the actual field work. As few people as possible should handle samples.
2. The field sampler is personally responsible for the care and custody of the samples collected until they are properly transferred or dispatched.
3. Sample tags shall be completed for each sample, using waterproof ink unless prohibited by weather conditions. For example, a log-book notation would explain that a pencil was used to fill out the sample tag because a ballpoint pen would not function in freezing weather.

4. The Project Coordinator determines whether proper custody procedures were followed during the field work and decides if additional samples are required.

Transfer of Custody and Shipment

1. Samples are accompanied by a Chain-of-Custody Record [Figure 3]. When transferring the possession of samples, the individuals relinquishing and receiving will sign, date, and note the time on the record. This record documents sample custody transfer from the sampler, often through another person, to the analyst in a mobile laboratory or at the NEIC laboratory in Denver. Figure 4 illustrates a completed Chain-of-Custody Record.
2. Samples will be packaged* properly for shipment and dispatched to the appropriate NEIC laboratory for analysis, with a separate custody record accompanying each shipment (e.g., one for each field laboratory, one for samples shipped, driven, or otherwise transported to NEIC). Shipping containers** will be padlocked or sealed for shipment to the laboratory.
3. It is a policy of the NEIC that sample splits will be offered to facility officials whenever samples are collected during an investigation. Samples may also be split with other Government agencies. When samples are split, a separate Transfer of Samples form [Figure 5] is prepared for those samples and marked to indicate with whom the samples are being split. The person relinquishing the samples to the facility or agency should request the signature ✓ of a representative of the appropriate party acknowledging receipt of the samples. If a representative is unavailable or refuses to

* See Appendix C

** Lidar data magnetic tapes are transported in secure magnetic-safe metal containers.

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

NATIONAL ENFORCEMENT INVESTIGATIONS CENTER
Building 52, Room 25221, Denver Federal Center
Denver, Colorado 80275

CHAIN OF CUSTODY RECORD

PROJ NO.	PROJECT NAME	NO OF CONTAINERS	TAG NUMBERS	REMARKS
28-A	Turner's Bayou	3	N1200-1201	On Sample by Verification RGA (check) M. H. (check)
SAMPLES (hours)	Gene Bevan	2	N1202-1203	
DATE	7/4/86	3	N1204, 1205, 1206	
STA NO.	DATE	TIME	STATION DESCRIPTION	
P1	7/4/86	1110	Dredge Sample	P11 < 2
P2	7/4/86	1115	Soil Sample	Face Sample
P3	7/4/86	1112	Water from Canal	
Received by: (Signature) <i>John Stimpfhardt</i>		Received by: (Signature) _____		Date / Time _____
Retransmitted by: (Signature) _____		Retransmitted by: (Signature) _____		Date / Time _____
Received for Laboratory by: (Signature) <i>Bob Stimpfhardt</i>		Received for Laboratory by: (Signature) _____		Date / Time _____
Date / Time 7/27/86		Date / Time 7/27/86 1130		Remarks Shipped Federal Express

Distribute Original to Project File, Copy to Laboratory, Copy to Custodian's File

FIGURE 4. COMPLETED CHAIN-OF-CUSTODY RECORD

N 1232

sign, this is noted in the "Received by" space. When appropriate, as in the case where the representative is unavailable, the Receipt for Sample form should contain a statement that the samples were delivered to the designated location at the designated time. Figure 6 illustrates a completed Transfer of Samples form.

Section 3007(a)(2) of the Resource Conservation and Recovery Act (RCRA) states ". . . If the officer, employee or representative obtains any samples, prior to leaving the premises, he shall give to the owner, operator, or agent-in-charge a receipt describing the samples obtained and, if requested, a portion of each such sample equal in volume or weight to the portion retained". Section 104 of the Comprehensive Environmental Response, Compensation and Liability Act contains identical requirements. The Receipt for Samples and Documents form [Figure 7] satisfies the above requirements. This form must be completed [Figure 8] and signed by the NEIC investigator and a responsible facility official (e.g., the owner, operator or agent-in-charge). When splits are offered but refused, indicate such refusal on the Receipt for Samples and Documents form in the description block.

For investigations conducted pursuant to the Toxic Substances Control Act (TSCA), the NEIC investigator must provide a responsible official of the facility with Notice of Inspection and TSCA Confidentiality Notice forms [Appendix D]. At the completion of the inspection, a Declaration of Confidential Business Information and Receipt for Samples and Documents forms [Appendix D] are completed, as appropriate.

4. All shipments will be accompanied by the Chain-of-Custody Record identifying its contents. The original record will accompany the shipment, and the copy will be retained by the Project Coordinator.

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

NATIONAL ENFORCEMENT INVESTIGATIONS CENTER
Building 51, Box 75227, Denver Federal Center
Denver, Colorado 80225

RECEIPT FOR SAMPLES AND DOCUMENTS

Name of Facility <i>Tom's Recycling</i>	PROJ. NO. <i>28-A</i>
Facility Location <i>812 Green St. Blackley, Okla</i>	

RECEIPT OF THE DOCUMENTS AND/OR SAMPLES DESCRIBED IS HEREBY ACKNOWLEDGED:

NO.	DESCRIPTION
<i>1</i>	<i>Three samples (7 contain OS) as described on Custody Sheet N1232</i>
<i>2</i>	<i>Copies of Laboratory records, Production records, and disposal records provided by Tom Britton</i>

Transferred by (Signature) <i>John Pumphandle</i>		RECEIPT SIGNATURE <i>Tom Britton</i>	
NAME <i>John Pumphandle</i>		NAME <i>Tom Britton</i>	
TITLE <i>Env. Eng.</i>	DATE SIGNED <i>2/6/86</i>	TITLE <i>President</i>	DATE SIGNED <i>2/6/86</i>

Distribution Original to Compliance from Field, Copy to Facility

N 1232

FIGURE 8. COMPLETED RECEIPT FOR SAMPLES AND DOCUMENTS FORM

5. If sent by mail, the package will be registered with return receipt requested. If sent by common carrier, petty cash will be used for expenditures of less than \$100, otherwise a Government Bill of Lading will be used. Freight bills, post office receipts and Bills of Lading will be retained as part of the permanent documentation.*

Laboratory Custody Procedures

1. A designated sample custodian accepts custody of the shipped samples and verifies that the information on the sample tags matches that on the Chain-of-Custody Record. A check mark along with the person's initials and date are then placed in the sample tag verification column on the Chain-of-Custody form. Pertinent information as to shipment, pickup, courier, etc. is entered in the "Remarks" section.

The laboratory custodian will use the sample tag number or assign a unique laboratory number to each sample tag and assure that all samples are transferred to the proper analyst or stored in the appropriate secure area.

2. Laboratory personnel are responsible for the care and custody of samples from the time they are received until the sample is exhausted or returned to storage.
3. Each Branch must follow its established system for tracking samples through the Laboratory and identifying the supporting documents. Each employee will be knowledgeable of the Standard Operating Procedures applicable to his/her respective Branch.

* Copies of the bills and receipts are provided the NEIC Office of Planning and Management to assure proper payment. Originals of these documents are retained for the project file.

4. When sample analyses and necessary quality assurance checks have been completed in the field laboratory, the unused portion of the sample secured as evidence must be disposed of properly. All identifying tags, data sheets and laboratory records shall be retained as part of the permanent documentation. Samples received by the NEIC laboratory will be retained until after analyses and quality assurance checks are completed. When investigative documents are requested by the EAU for the evidentiary file, all identifying tags are removed* for retention in the permanent documentation. Sample containers and remaining sample material should be disposed of appropriately when all analyses and related quality assurance work are completed. The Assistant Director, Laboratory Services, in coordination with the Chief, Enforcement Specialist Office, will authorize disposal of samples and remaining sample portions for all investigations other than criminal investigations.** For the latter, the Assistant Director, Office of Criminal Investigations, will notify the Assistant Director, Laboratory Services and the Chief, Enforcement Specialist Office, when the disposal of samples collected in support of criminal investigations can occur.

5. Samples of materials which have been associated with high hazard levels are received in a Regulated Access Laboratory (RAL). This laboratory reduces the hazardous characteristics of these samples and prepares them for routine analysis. To avoid potential contamination, tags from samples received by the RAL are not considered permanent documents and will not be incorporated into the

* Tags will only be removed if the samples are no longer required for evidence. If the samples are required for evidence, a list of the sample tags will be provided the Evidence Audit Unit. When the tags can be removed, they will be sent to the Evidence Audit Unit for the evidentiary file.

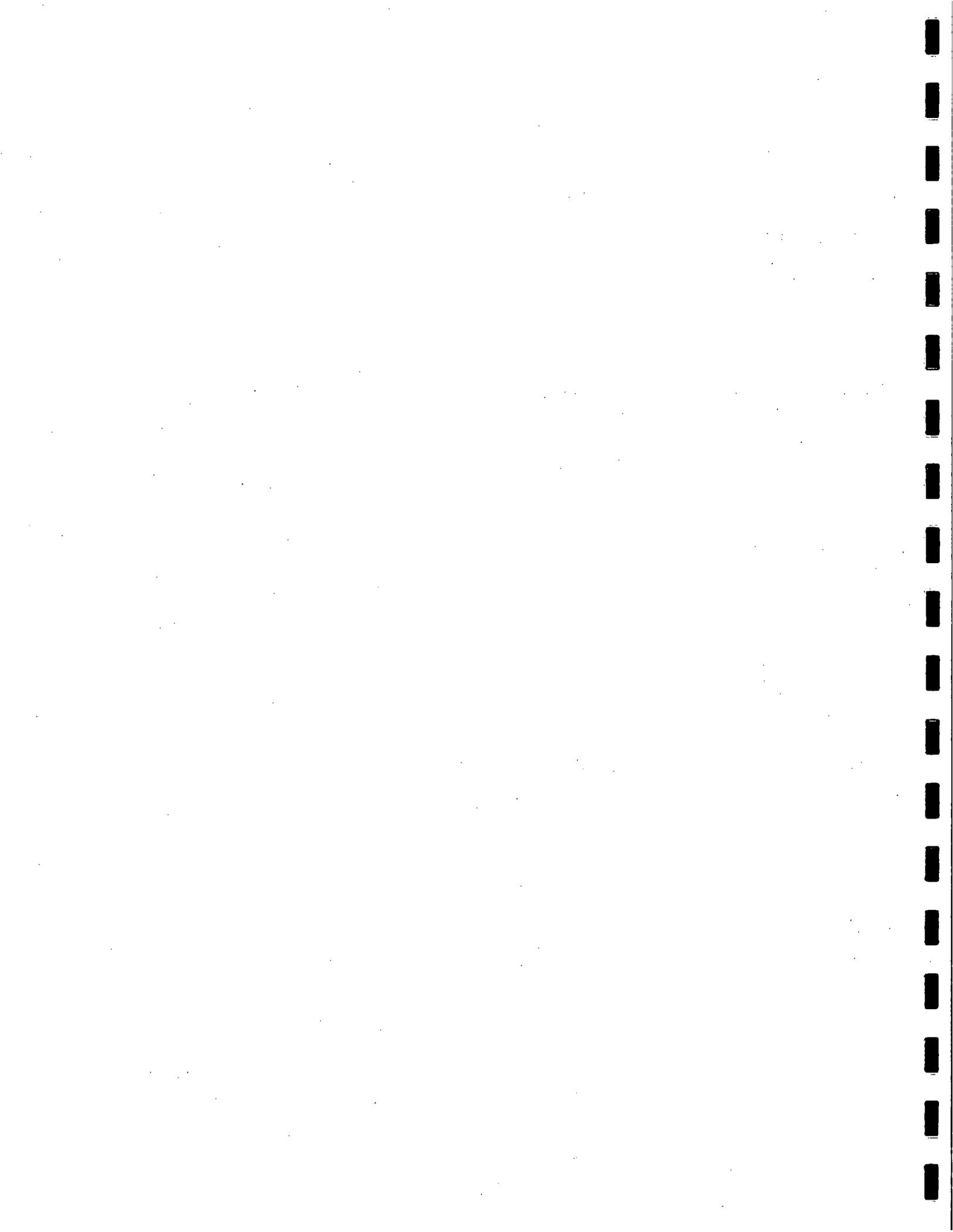
** Sample disposal will be as described in the document titled "NEIC Regulated Materials Disposal Procedures."

evidentiary file. The RAL will verify that the information on arriving sample tags is accurately recorded on the appropriate Chain-of-Custody Record and notify the Project Coordinator of any discrepancies. The sample tag number is entered on the Chain-of-Custody Record in the "Comments" column. RAL personnel will initial the entry after verifying sample tag data or resolving a discrepancy.

6. The RAL will submit a memorandum to EAU when the project documents are assembled. The memorandum, to be retained in the evidentiary file, certifies that the sample tags have been appropriately disposed of together with the sample containers and any remaining portions.
7. Lidar data magnetic tapes will be copied into the appropriate NEIC minicomputer disc files. The original tapes will then be stored and the disc data will be used for computer data processing.



APPENDIX B
CHANGE ORDER FORM



CHANGE ORDER NO. _____

Subcontract Description _____ Date _____

Project _____

Subcontract No. _____ Subcontractor _____

Date of Subcontract Time Start _____ Original Subcontract Award \$ _____

Change Ordered Herewith:

Reason for Change Order:

SUBCONTRACT AMOUNT

SUBCONTRACT TIME (CAL. DAYS)

To subs.
completion

To final
completion

Original: \$ _____

Original: _____

Previous C.O.s _____

Previous C.O.s _____

(ADD/DEDUCT): \$ _____

(ADD/DEDUCT): _____

This C.O. _____

This C.O. _____

(ADD/DEDUCT): \$ _____

(ADD/DEDUCT): _____

REVISED: \$ _____

REVISED: _____

Orig. Compl. Date: _____

Rev. Compl. Date: _____

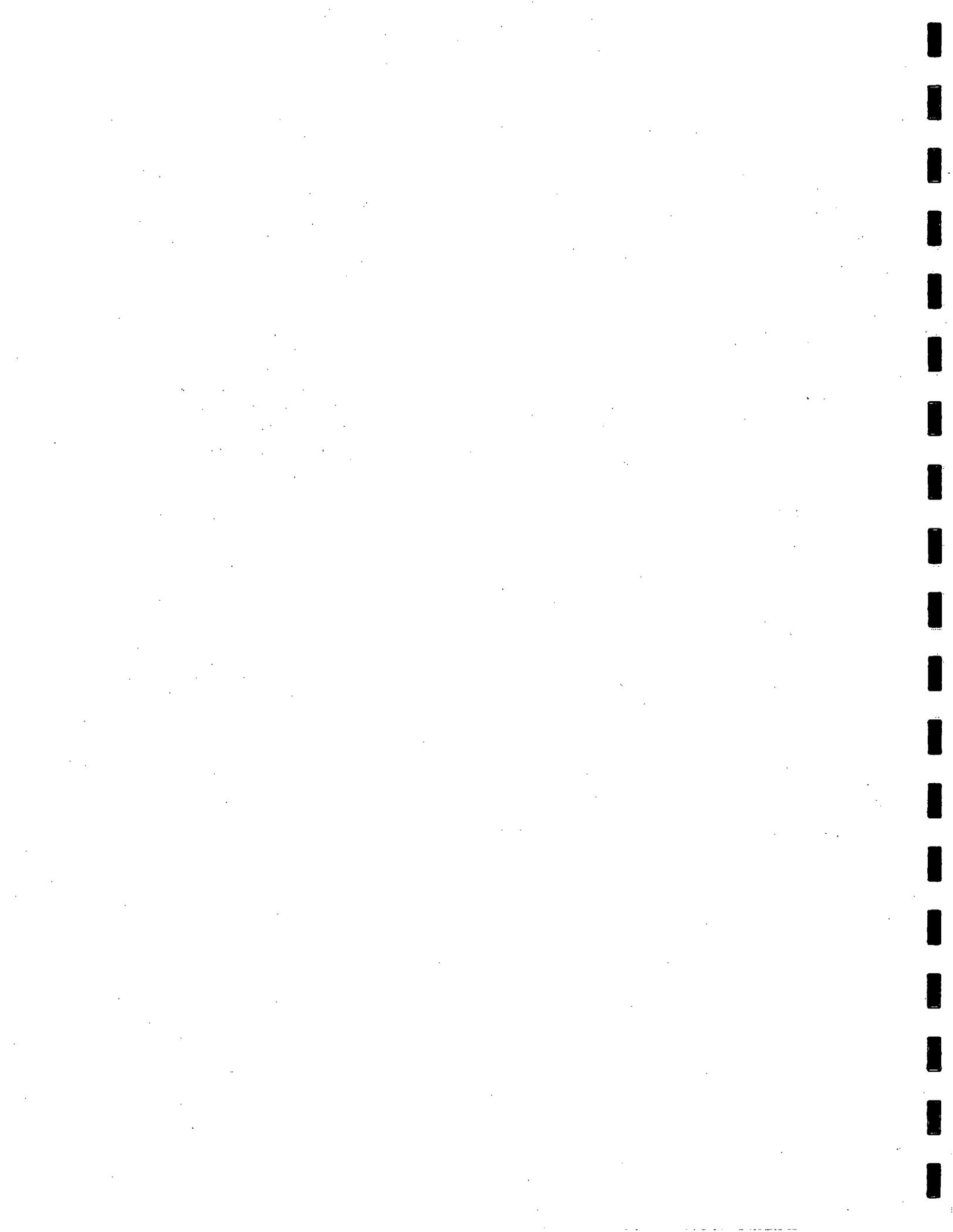
It is agreed by the Subcontractor that this change order includes any and all costs associated with or resulting from the change ordered herein, including all impact, delays, and acceleration costs. Other than the dollar amount and time allowance listed above, there shall be no further time or dollar compensation as a result of this change order.

THIS DOCUMENT SHALL BECOME AN AMENDMENT TO THE SUBCONTRACT AND ALL STIPULATIONS AND COVENANTS OF THE SUBCONTRACT SHALL APPLY HERETO.

Subcontractor _____ By: _____ Date _____

Donohue & Associates, Inc. _____ By: _____ Date _____

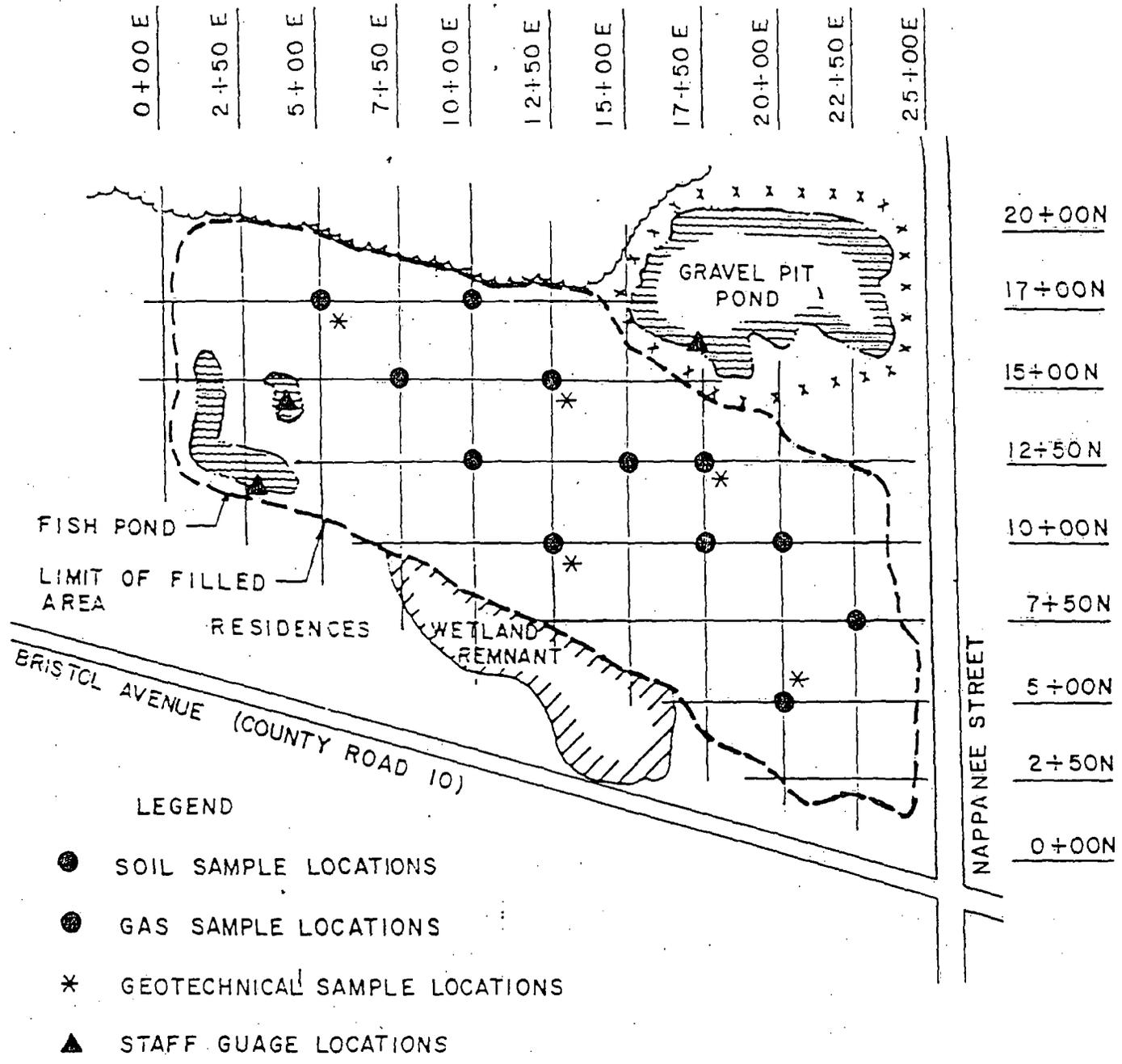
Donohue & Associates, Inc. _____ Engineers & Architects
Subcontract Change
Number Order No.



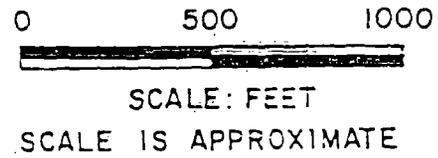
APPENDIX C

GENERAL LOCATION MAP





SOURCE: US EPA, AUGUST, 1986



Donohue APPROXIMATE SITE SAMPLING LOCATIONS

20026 FIELD SAMPLING PLAN
MAY, 1990 HIMCO DUMP SITE
Elkhart, INDIANA

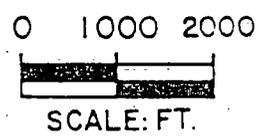
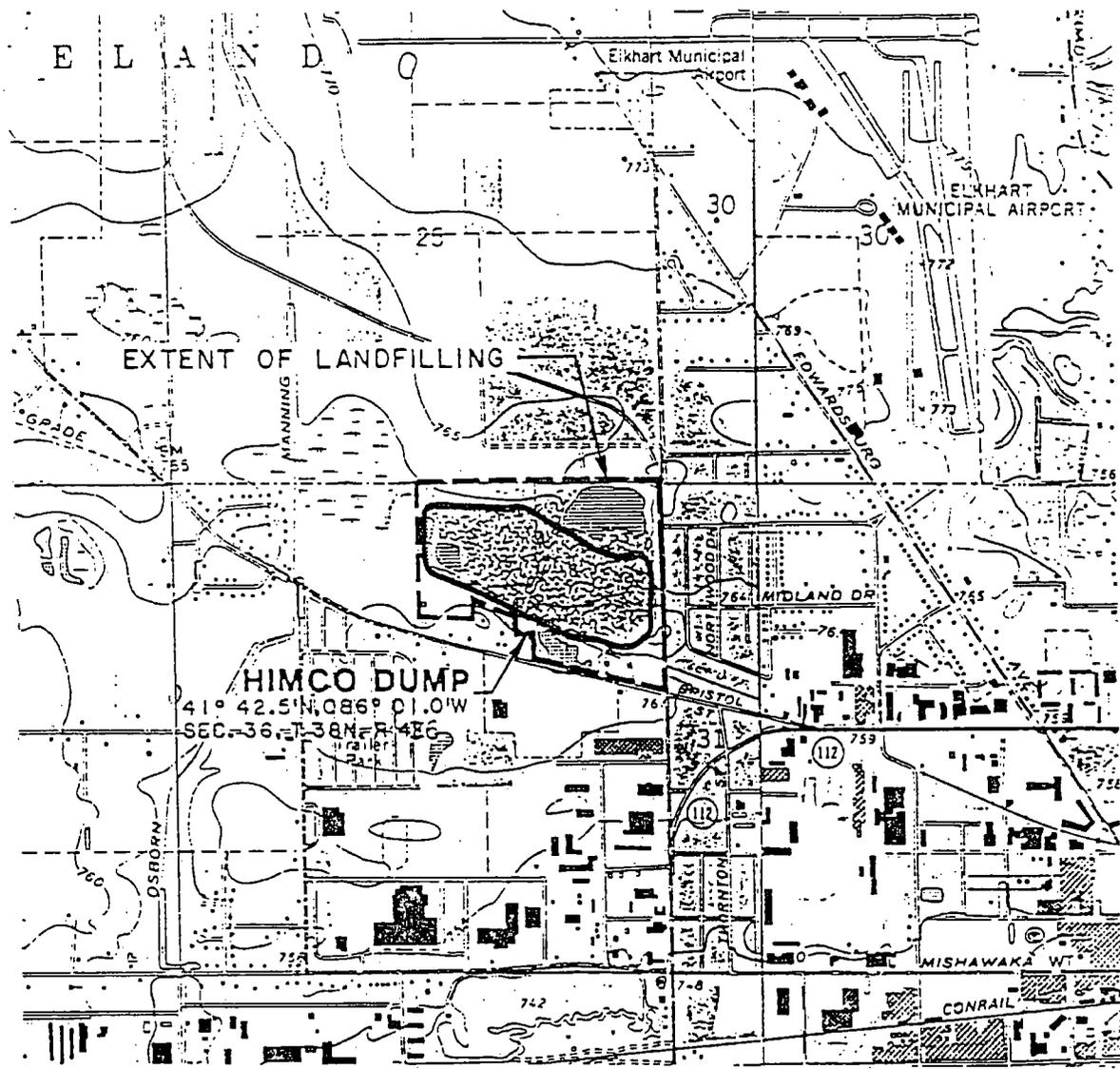
FIGURE 4-1

Engineers • Architects • Scientists



APPENDIX D

GENERAL BORINGS AND WELL LOCATIONS

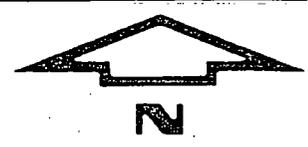


SOURCE: USGS 7.5 MIN. QUAD ELKHART, INDIANA, 1961
 PHOTOREVISED 1981

Donohue

20026

SITE LOCATION MAP

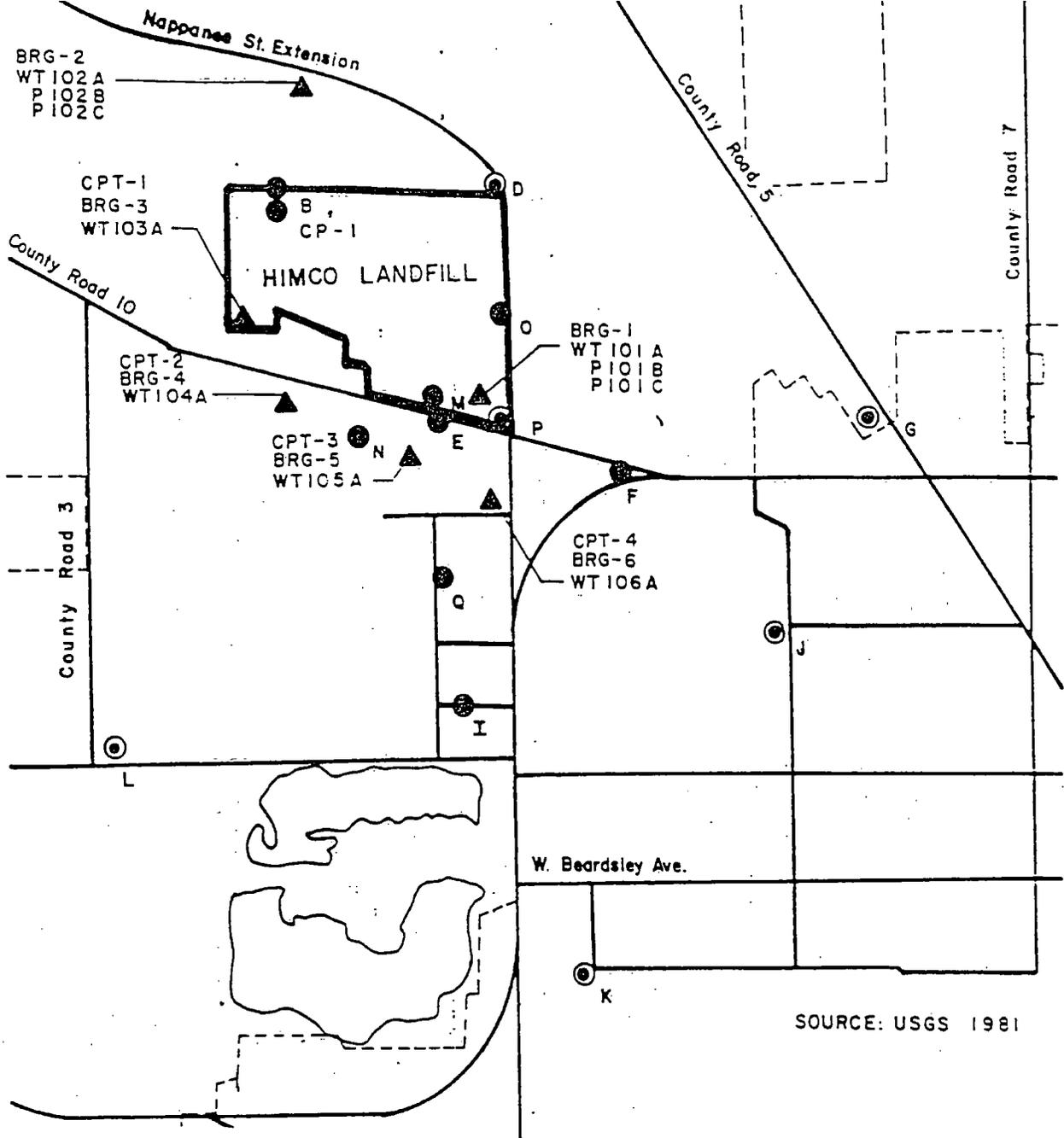


FEBRUARY, 1990

HIMCO DUMP SITE
 ELKHART COUNTY, INDIANA

FIGURE 2-1

Engineers • Architects • Scientists



SOURCE: USGS 1981

LEGEND

- BRG BORING
- CPT CONE PENETRATION TEST LOCATION
- EXISTING USGS WELL NEST TO SAMPLE
- ▲ PROPOSED MONITOR WELL
- ⊙ EXISTING USGS WELL NEST

NOT TO SCALE

Donohue

BORING, MONITORING WELL AND EXISTING USGS WELL LOCATIONS

FIELD SAMPLING PLAN

HIMCO DUMP SITE
ELKHART, INDIANA



20026
MAY, 1990

Engineers • Architects • Scientists

FIGURE 4-2

APPENDIX E

SUMMARY OF BORINGS AND WELL LOCATIONS

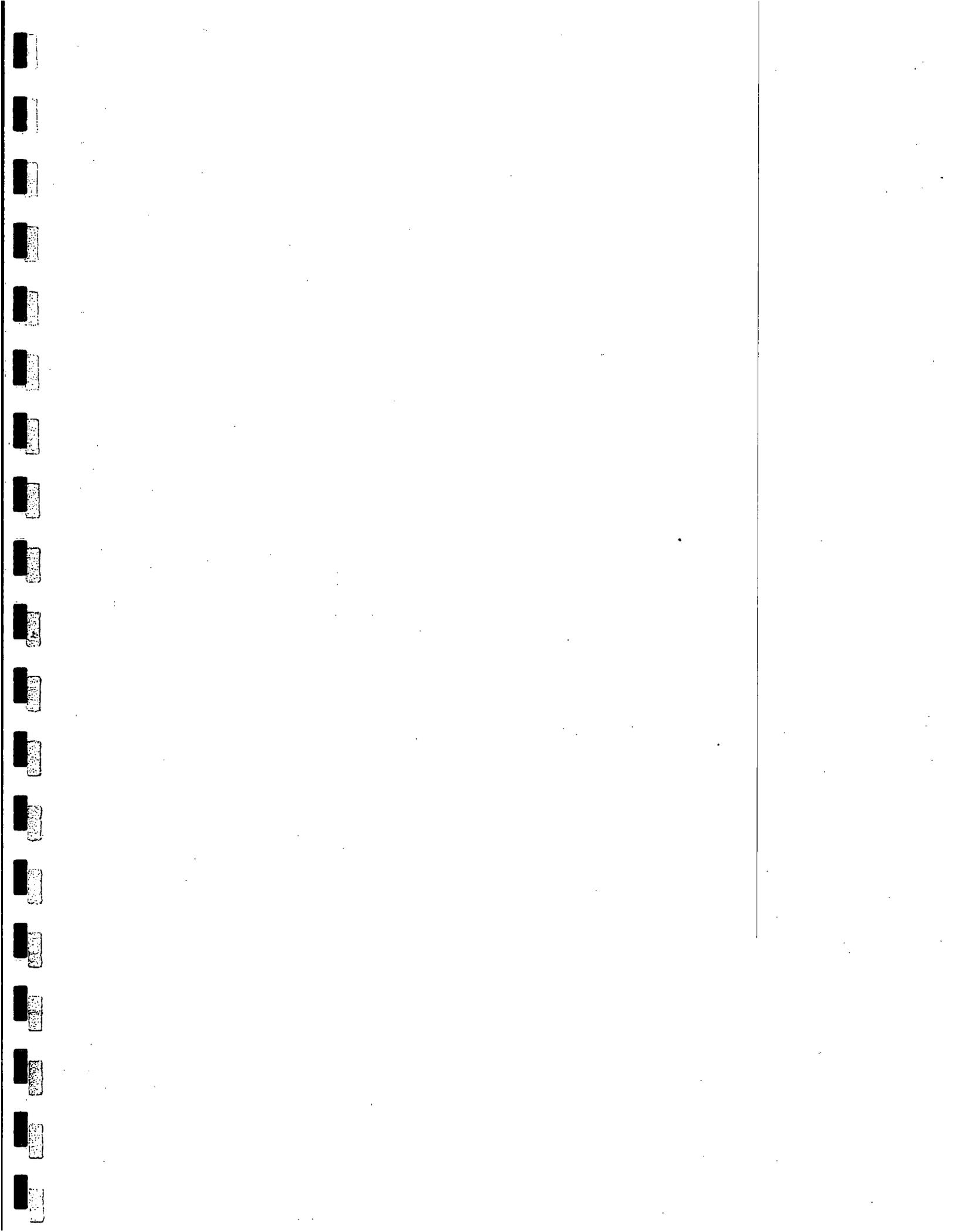


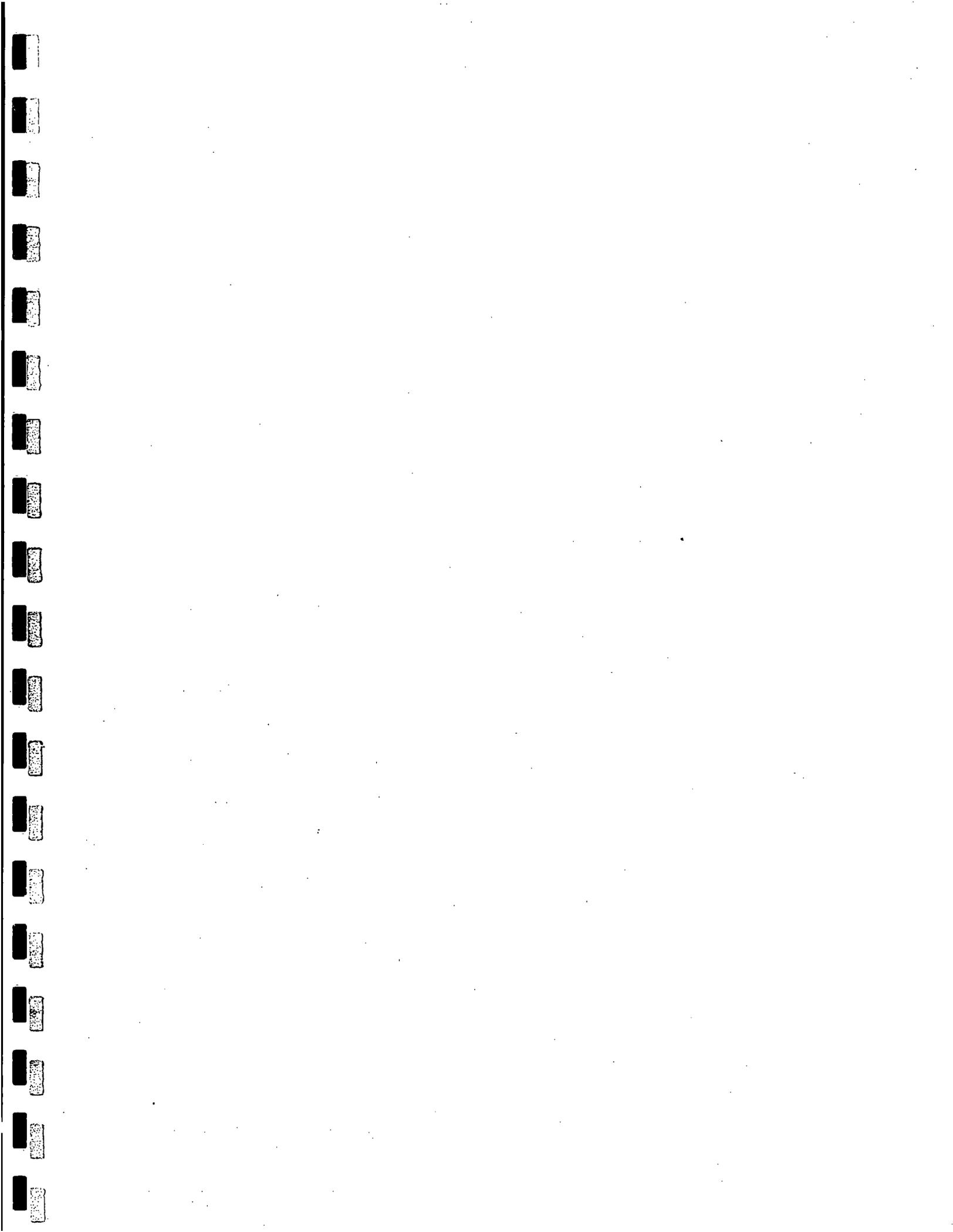
TABLE 4-4

GROUNDWATER SAMPLING PLAN RATIONALE

	<u>SAMPLE NUMBERS</u>	<u>RATIONALE</u>
Boring:	BRG 01 - 06	- Characterize site stratigraphy. - Define confining layer - depth, extent, character, and surface.
New Wells:	WT102A P102B P102C	- Obtain unimpacted <u>upgradient</u> source of groundwater for chemical characterization. - Define horizontal and vertical flow gradients.
Existing: USGS Wells	B-1 - B-4 CP-1	- Calculate aquifer hydraulic characteristics. - Evaluate remedial action alternatives. - Comparison of USGS wells to newly constructed wells for groundwater quality and hydraulic characteristics.
New Wells:	WT101A P101B P101C	- Obtain <u>downgradient</u> source of groundwater for chemical characterization. - Assess risks from exposure by ingestion, inhalation, and direct contact. - Evaluate remedial action alternatives.
Existing: USGS Wells	O-1 M-1 M-2 E-2 E-3	- Comparison of USGS wells to newly constructed monitoring wells for groundwater quality and hydraulic characteristics. - Define horizontal and vertical flow gradients. - Characterize nature and extent of groundwater contamination.
Existing: USGS Wells	F-1 F-2 F-3 I-1 I-2 I-3	- Compare groundwater quality and hydraulic characteristics of upper unconfined aquifer and lower confined aquifer. - Define horizontal and vertical flow gradients. - Calculate aquifer hydraulic characteristics. - Characterize nature and extent of groundwater contamination. - Assess risks from exposure by ingestion, inhalation, and direct contact. - Evaluate remedial action alternatives.
New Wells:	WT103A WT104A WT105A WT106A	- Obtain <u>downgradient</u> source of groundwater for chemical characterization. - Define horizontal and vertical flow gradients. - Calculate aquifer hydraulic characteristics. - Characterize nature and extent of groundwater contamination.

APPENDIX F

TYPICAL WELL CONSTRUCTION DIAGRAMS

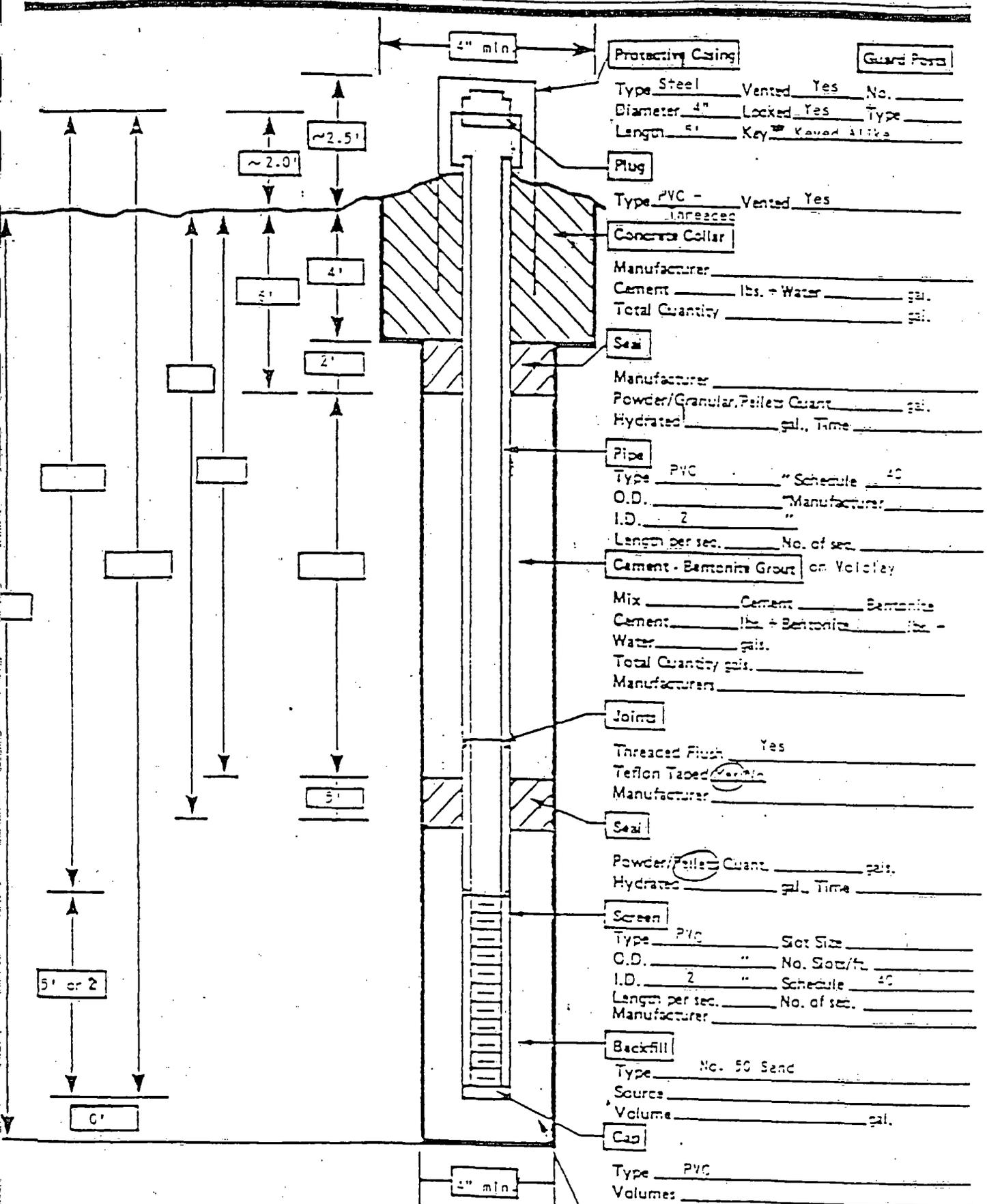


Site: Himco Dump

Date: _____

By: _____

Project No. _____



Protecting Casing **Guard Pond**

Type Steel Vented Yes No. _____
 Diameter 4" Locked Yes Type _____
 Length 5' Key Keyed Aluka

Plug

Type PVC - Vented Yes
Inreaced

Concrete Collar

Manufacturer _____
 Cement _____ lbs. + Water _____ gal.
 Total Quantity _____ gal.

Seal

Manufacturer _____
 Powder/Granular/Pellets Quant _____ gal.
 Hydrated _____ gal., Time _____

Pipe

Type PVC " Schedule 40
 O.D. _____ " Manufacturer _____
 I.D. 2 "
 Length per sec. _____ No. of sec. _____

Cement - Bentonite Grout on Void-fil

Mix _____ Cement _____ Bentonite _____
 Cement _____ lbs. + Bentonite _____ lbs. -
 Water _____ gal.
 Total Quantity gal. _____
 Manufacturer _____

Joints

Threaded Finish Yes
 Teflon Taped Marlin
 Manufacturer _____

Seal

Powder/Pellets Quant _____ gal.
 Hydrated _____ gal., Time _____

Screen

Type PVC Slot Size _____
 O.D. _____ " No. Slot/ft. _____
 I.D. 2 " Schedule 40
 Length per sec. _____ No. of sec. _____
 Manufacturer _____

Backfill

Type No. 50 Sand
 Source _____
 Volume _____ gal.

Cap

Type PVC
 Volumes _____

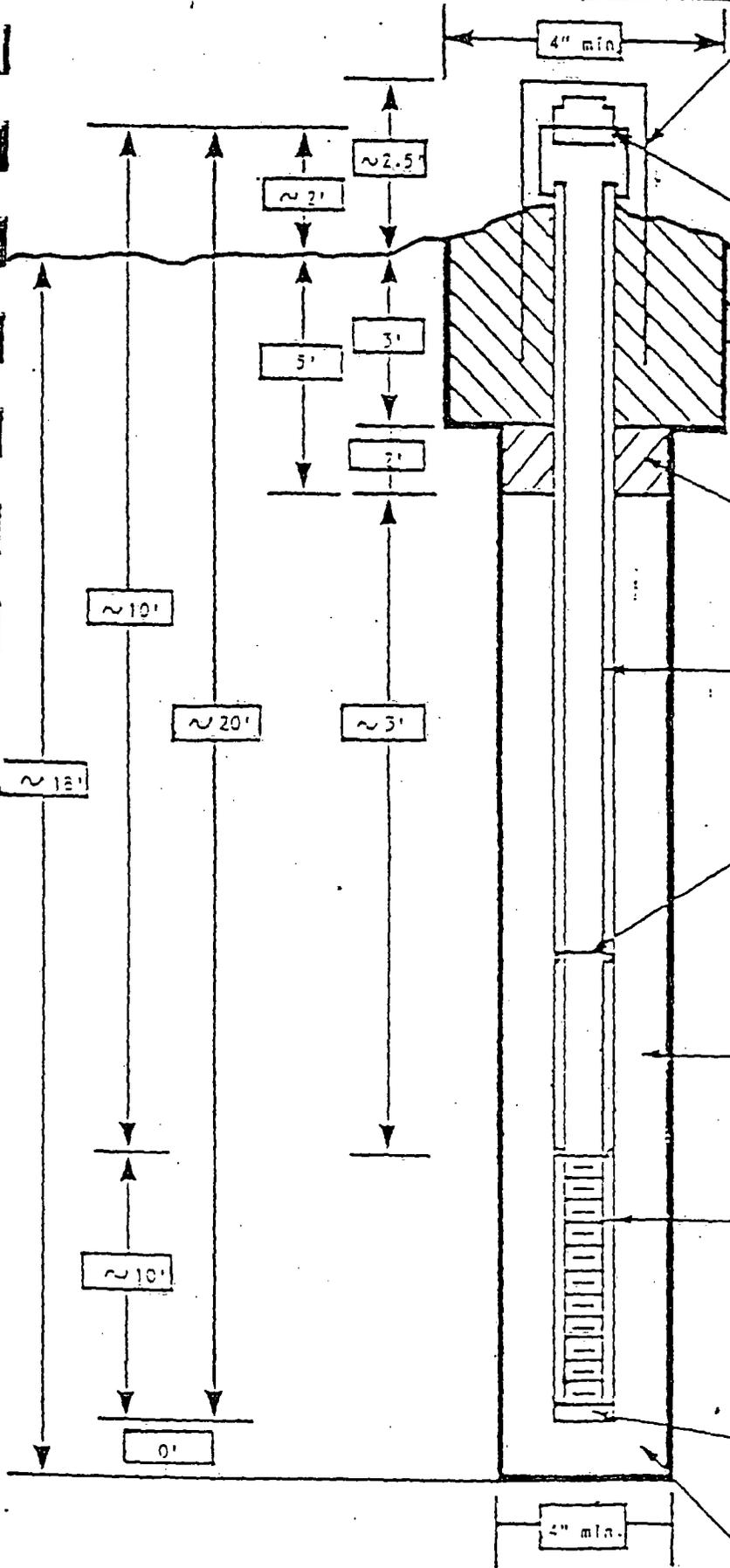
Material

No. 50 Sand

Notes: Water Source _____

Site: Himco Dump Date: _____

By: _____ Project No. _____



Protective Casing
Type Steel Vented Yes Type _____
Diameter 4" Locked Yes
Length 5' Key Kevel Alite

Guard Posts

Plug
Type PVC - Threaded
Vented Yes

Concrete Collar
Quant. Cement _____ lbs. + Quant. Water _____ gal.
Total Quant. _____ gal.
Manufacturer _____

Seal
Powder/Granular/Pellets Quant. _____ gal.
Manufacturer _____
Hydrated _____ gal., Time _____

Pipe
Type PVC
O.D. _____ " Manufacturer _____
I.D. 2 " Schedule 40
Length/per sec. _____ No. of sec. _____

Joints
Threaded Flush Joint:
Teflon Taped Yes/No
Tape _____
Manufacturer _____

Backfill
Type(s) No. 50 Sand
Source _____
Volume _____

Screen
Type PVC Slot Size No. 10
O.D. _____ " No. Slots _____
I.D. 2 " Schedule _____
Manufacturer _____
Length/per sec. _____ No. of sec. _____

Cap
Type PVC - Threaded

Material
No. 50 Sand

Notes: Water Source _____

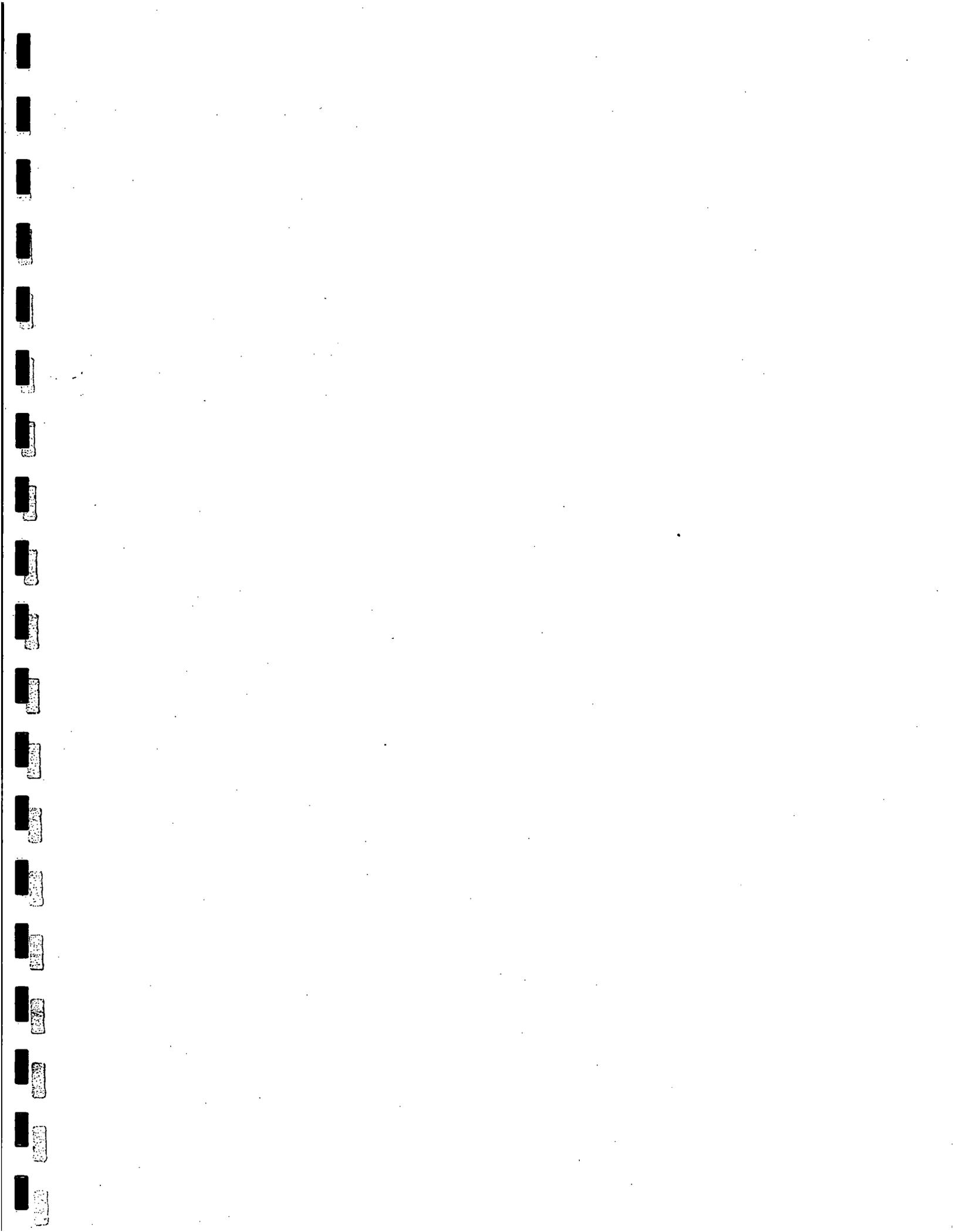
APPENDIX G

SITE SPECIFIC HEALTH AND SAFETY PLAN (HASP)
(PROVIDED UNDER SEPARATE COVER)



APPENDIX H

LISTING OF POTENTIALLY RESPONSIBLE PARTIES



All bidders are to identify, with their bid, any involvement with the following listed companies or individuals.

Bidders should review Clauses H.17, Notification of Conflict of Interest regarding Personnel, page EPAAR-4, and Clause 1552.209-71, Organizational Conflicts of Interests (attached).

This list represents preliminary findings on the identities of PRP's by the U.S. Environmental Protection Agency. Inclusion on this list does not constitute a final determination concerning the liability of any party for the hazard or contamination at any CERCLA site.

Miles Laboratory
Himco
Charles Himes
CLD Corporation
Travel Kraft

1552.209-71 Organizational conflicts of interest.

ORGANIZATIONAL CONFLICTS OF INTEREST (APR 1984)

- a The Contractor warrants that, to the best of the Contractor's knowledge and belief, there are no relevant facts or circumstances which could give rise to an organizational conflict of interest, as defined in FAR Subpart 9.5, or that the Contractor has disclosed all such relevant information.
- b The Contractor agrees that if an actual or potential organizational conflict of interest is discovered after award, the Contractor will make a full disclosure in writing to the Contracting Officer. This disclosure shall include a description of actions which the Contractor has taken or proposes to take, after consultation with the Contracting Officer, to avoid, mitigate, or neutralize the actual or potential conflict.
- c Remedies--The EPA may terminate this contract for convenience, in whole or in part, if it deems such termination necessary to avoid an organizational conflict of interest. If the Contractor was aware of a potential organizational conflict of interest prior to award or discovered an actual or potential conflict after awarded and did not disclose or misrepresented relevant information to the Contracting officer the Government may terminate the contract for default, debar the Contractor from Government contracting, or pursue such other remedies as may be permitted by law or this contract.
- d The Contractor further agrees to insert in any subcontract or consultant agreement hereunder, provisions which shall conform substantially to the language of this clause, including this paragraph (d).

(End of Clause)

APPENDIX I

DAILY PAY SHEET



DAILY PAY SHEET
HIMCO DUMP SUPERFUND SITE
REMEDIAL INVESTIGATION/FEASIBILITY STUDY

<u>Item</u>	<u>Estimated Quantity</u>	<u>Unit Cost</u>	<u>Total</u>
1. Mobilization-Demobilization per Lump Sum			\$ _____
2. Per diem expenses, 2 man drilling crew, per day, 25 days	<u>25 days</u>	\$ _____	\$ _____
Per diem expenses, 2 man test pit excavation crew, per day, 10 days	<u>10 days</u>	\$ _____	\$ _____
3. Soil Boring for New Wells			
A. 6 ea, Observation Wells			
1. Hollow Stem Auger Boring With Continuous Split Spoon Sampling and Sampler Decontamination			
a. 0-20 ft depth interval, per ft	<u>120 ft</u>	\$ _____	\$ _____
b. 20-30 ft depth interval, per ft	<u>15 ft</u>	\$ _____	\$ _____
B. 2 ea, Intermediate Piezometers			
1. Air Rotary Blind Drill for Well Installation Only			
a. 0-20 ft depth interval, per ft	<u>40 ft</u>	\$ _____	\$ _____
b. 20-40 ft depth interval, per ft	<u>40 ft</u>	\$ _____	\$ _____
c. 40-60 ft depth interval, per ft	<u>40 ft</u>	\$ _____	\$ _____
d. 60-80 ft depth interval, per ft	<u>40 ft</u>	\$ _____	\$ _____
e. 80-100 ft depth interval, per ft	<u>40 ft</u>	\$ _____	\$ _____
f. 100-120 ft depth interval, per ft	<u>20 ft</u>	\$ _____	\$ _____

<u>Item</u>	<u>Estimated Quantity</u>	<u>Unit Cost</u>	<u>Total</u>
2. Dedicated Flush Threaded 6-in. ID Steel Casing, per LF			
a. 0-20 ft depth interval, per ft	<u>40 ft</u>	\$ _____	\$ _____
b. 20-40 ft depth interval, per ft	<u>40 ft</u>	\$ _____	\$ _____
c. 40-60 ft depth interval, per ft	<u>40 ft</u>	\$ _____	\$ _____
d. 60-80 ft depth interval, per ft	<u>40 ft</u>	\$ _____	\$ _____
e. 80-100 ft depth interval, per ft	<u>40 ft</u>	\$ _____	\$ _____
f. 100-120 ft depth interval, per ft	<u>40 ft</u>	\$ _____	\$ _____
C. 2 ea, Deep Piezometers			
1. Air Rotary Blind Drill for Well Installation Only			
a. 0-20 ft depth interval, per ft	<u>40 ft</u>	\$ _____	\$ _____
b. 20-40 ft depth interval, per ft	<u>40 ft</u>	\$ _____	\$ _____
c. 40-60 ft depth interval, per ft	<u>40 ft</u>	\$ _____	\$ _____
d. 60-80 ft depth interval, per ft	<u>40 ft</u>	\$ _____	\$ _____
e. 80-100 ft depth interval, per ft	<u>40 ft</u>	\$ _____	\$ _____
f. 100-120 ft depth interval, per ft	<u>40 ft</u>	\$ _____	\$ _____
g. 120-140 ft depth interval, per ft	<u>40 ft</u>	\$ _____	\$ _____
h. 140-160 ft depth interval, per ft	<u>40 ft</u>	\$ _____	\$ _____
i. 160-180 ft depth interval, per ft	<u>40 ft</u>	\$ _____	\$ _____
j. 180-200 ft depth interval, per ft	<u>20 ft</u>	\$ _____	\$ _____
2. Dedicated Flush Threaded 6-in. ID Steel Casing, per LF			
a. 0-20 ft depth interval, per ft	<u>40 ft</u>	\$ _____	\$ _____
b. 20-40 ft depth interval, per ft	<u>40 ft</u>	\$ _____	\$ _____

<u>Item</u>	<u>Estimated Quantity</u>	<u>Unit Cost</u>	<u>Total</u>
c. 40-60 ft depth interval, per ft	<u>40 ft</u>	\$ _____	\$ _____
d. 60-80 ft depth interval, per ft	<u>40 ft</u>	\$ _____	\$ _____
e. 80-100 ft depth interval, per ft	<u>40 ft</u>	\$ _____	\$ _____
f. 100-120 ft depth interval, per ft	<u>40 ft</u>	\$ _____	\$ _____
g. 120-140 ft depth interval, per ft	<u>40 ft</u>	\$ _____	\$ _____
h. 140-160 ft depth interval, per ft	<u>40 ft</u>	\$ _____	\$ _____
i. 160-180 ft depth interval, per ft	<u>40 ft</u>	\$ _____	\$ _____
j. 180-200 ft depth interval, per ft	<u>20 ft</u>	\$ _____	\$ _____

4. Well Construction

A. 20-ft, Observation Wells, per ft	<u>6 ea</u>	\$ _____	\$ _____
B. 100-ft, Intermediate Piezometers, per ft	<u>2 ea</u>	\$ _____	\$ _____
C. 175-ft, Deep Piezometers, per ft	<u>2 ea</u>	\$ _____	\$ _____

5. Soil Boring for Stratigraphic Information

A. 4 ea, Soil Borings

1. Rotary wash/mud rotary with split spoon sampling at 5-ft intervals			
a. 0-20 ft depth interval, per ft	<u>80 ft</u>	\$ _____	\$ _____
b. 20-40 ft depth interval, per ft	<u>80 ft</u>	\$ _____	\$ _____
c. 40-60 ft depth interval, per ft	<u>80 ft</u>	\$ _____	\$ _____
d. 60-80 ft depth interval, per ft	<u>80 ft</u>	\$ _____	\$ _____
e. 80-100 ft depth interval, per ft	<u>80 ft</u>	\$ _____	\$ _____
f. 100-120 ft depth interval, per ft	<u>80 ft</u>	\$ _____	\$ _____
g. 120-140 ft depth interval, per ft	<u>80 ft</u>	\$ _____	\$ _____

Item

Estimated
Quantity

Unit
Cost

Total

h. 140-160 ft depth interval, per ft	<u>80 ft</u>	\$ _____	\$ _____
i. 160-180 ft depth interval, per ft	<u>80 ft</u>	\$ _____	\$ _____
j. 180-200 ft depth interval, per ft	<u>40 ft</u>	\$ _____	\$ _____

2. Additional split spoon samples
(optional)

a. 0-20 ft depth interval, per ft		\$ _____	
b. 20-40 ft depth interval, per ft		\$ _____	
c. 40-60 ft depth interval, per ft		\$ _____	
d. 60-80 ft depth interval, per ft		\$ _____	
e. 80-100 ft depth interval, per ft		\$ _____	
f. 100-120 ft depth interval, per ft		\$ _____	
g. 120-140 ft depth interval, per ft		\$ _____	
h. 140-160 ft depth interval, per ft		\$ _____	
i. 160-180 ft depth interval, per ft		\$ _____	
j. 180-200 ft depth interval, per ft		\$ _____	

3. Additional Shelby tube samples

a. 0-20 ft depth interval, per sample	<u>1</u>	\$ _____	\$ _____
b. 20-40 ft depth interval, per sample	<u>1</u>	\$ _____	\$ _____
c. 40-60 ft depth interval, per sample	<u>1</u>	\$ _____	\$ _____
d. 60-80 ft depth interval, per sample	<u>1</u>	\$ _____	\$ _____
e. 80-100 ft depth interval, per sample	<u>1</u>	\$ _____	\$ _____
f. 100-120 ft depth interval, per sample	<u>1</u>	\$ _____	\$ _____
g. 120-140 ft depth interval, per sample	<u>1</u>	\$ _____	\$ _____
h. 140-160 ft depth interval, per sample	<u>1</u>	\$ _____	\$ _____

<u>Item</u>	<u>Estimated Quantity</u>	<u>Unit Cost</u>	<u>Total</u>
i. 160-180 ft depth interval, per sample	<u>1</u>	\$ _____	\$ _____
j. 180-200 ft depth interval, per sample	<u>1</u>	\$ _____	\$ _____
6. Boring Abandonment			
A. Soil Borings, per ft	<u>780 ft</u>	\$ _____	\$ _____
7. Shelby Tube Sampling of Landfill Cap			
A. Push Shelby Tubes into Landfill Cap 3-ft long 3-in. dia at depth of 2- to 5-ft	<u>7</u>	\$ _____	\$ _____
8. Decontamination and Containerization			
A. Steam Cleaning Locations, per location	<u>7 ea</u>	\$ _____	\$ _____
B. 55-gal DOT-Approved Drums, per drum	<u>25 ea</u>	\$ _____	\$ _____
C. Steam Clean Equipment between Test Pit Locations	<u>20 ea</u>	\$ _____	\$ _____
9. 8 hours, Standby-Time, (Optional), per hour	<u>8 hrs</u>	\$ _____	\$ _____
10. Site Structures.			
A. Construction of Equipment Decon- tamination Pad as Specified in Section 02910	<u>1</u>	\$ _____	\$ _____
B. Construction of Drum Storage Area as Specified in Section 02910	<u>1</u>	\$ _____	\$ _____
11. Personnel Protection			
A. 10 days, Level C Protection and Equipment, Per Day, (Optional)	<u>10 days</u>	\$ _____	\$ _____
B. 10 days, Level B Protection and Equipment, per day (Optional)	<u>10 days</u>	\$ _____	\$ _____
12. Test Pit Excavation			
A. Test Pit Excavation - Zone 1 (0 to 3'0" depth) (Level B)(Optional), 20 locations		\$ _____	\$ _____

<u>Item</u>	<u>Estimated Quantity</u>	<u>Unit Cost</u>	<u>Total</u>
B. Test Pit Excavation - Zone 2 (3'1" to 6'0" depth) (Level B) (Optional),	20 locations	\$ _____	\$ _____
C. Test Pit Excavation - Zone 3 (6'1" to 9'0" depth) (Level B) (Optional),	20 locations	\$ _____	\$ _____
D. Test Pit Excavation - Zone 4 (9'1" to 12'0" depth) (Level B) (Optional),	20 locations	\$ _____	\$ _____
E. Test Pit Excavation - Zone 5 (12'1" to 15'0" depth) (Level B) (Optional),	20 locations	\$ _____	\$ _____

Total Amount this Pay Sheet \$ _____

Contractor Representative

Donohue Representative